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ABSTRACT

A study undertaken in Arizona in 1975 was comprised of two parts, a pilot study and a comprehensive survey of high school students. It had as an overall objective to provide a data resource useful to all citizens and postsecondary institutions, to manpower and employment agencies, and to the state's high schools for program planning and counseling. A large sample of students was used, and a large number of usable responses resulted (over 6,000). The research design used viewed transition from high school to post-high school activities as existing in three distinguishable and mutually exclusive flows: (1) a work group; (2) a vocational-technical education group; and (3) a college group. In the final report considerable attention is given to the details of the study, as well as to its statistical results. An extensive bibliography is included. (MSE)

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A Study of Post-Graduate Plans of Arizona High School Seniors

Final Report
June, 1977

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Prepared for the Arizona Commission
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Chapter I

INTRODUCTION TO THE STUDY

This is the first comprehensive statewide survey of post-graduate plans of high school seniors conducted in Arizona.

The study seems timely and even, in a sense, critical for postsecondary educational planning for the years immediately ahead. In the last decade, Arizona has seen its structure of traditional types of colleges and universities essentially completed. In particular, the state's network of public community colleges has emerged in the last decade as a mature and comprehensive set of dynamic institutions responsive to the needs of urban dwellers and those in rural areas alike. The state's three public universities have continued the growth rate, among the highest in the nation, which has brought them into regional, even national, prominence. However, the private sector, as in most western (especially Rocky Mountain region) states remains small, and in fact, even lost one of its most notable institutions with the recent closing of Prescott College.

Beyond the full development of the traditional sectors of public higher education in Arizona, this study seems particularly timely because of the newly expanded concept of "postsecondary" as opposed to the more narrow traditional definition of "higher education." As the author has written

elsewhere,

> With the passage of the Education Amendments of 1972, the Congress of the United States introduced to the nation's educators a new academic and educational environment. For included in those amendments, under Title XII, General Provisions, was Section 1202 pertaining to the establishment of state postsecondary education commissions. This section of the Amendments signified an expanded awareness of the multifaceted educational endeavors beyond the high school not formerly included in the restricted concept of 'higher education.' What Congress had officially recognized, and what the states' and the nation's educators were soon to recognize, was the new environment of postsecondary education. (Fenske and Romesburg, 1975)

Specifically, the new concept of postsecondary education recognizes that for persons who have graduated from high school (or are beyond the age of compulsory school attendance) further education can be undertaken at <u>any</u> age, in a wide variety of settings and format, and for an almost infinite number of purposes. For example, the new concept explicitly includes post-high school education offered through proprietary (for profit) schools and colleges. The fact of the matter is that for many Arizona high school graduates, the types of programs offered through the state's proprietary schools and colleges have always been an attractive option. An inventory of all postsecondary educational opportunities in Arizona (the first such inventory of its kind) conducted by the Arizona Commission on Postsecondary Education (ACPE) in 1975 identified 195 proprietary schools and colleges. Clearly they had existed as a viable option for high school graduates for some time. The more traditional sectors simply had not recognized their significance.

Another development which indicates the timeliness of the present study is the advent of the first statewide student financial aid program in Arizona, the State Scholarship Incentive Grant program. If it can be assumed that this and perhaps subsequent programs operated by the state for its student citizens will have an impact on the changing opportunities and post-high school patterns of education, then it will be particularly useful to gather data for such plans at this time.

The present study also pertains to the generalized problems which Arizona shares with many other states concerning postsecondary education. For example, the past few years have seen extreme and unpredictable enrollment fluctuations of first-time students. Arizona also has high unemployment rates and lack of career opportunities for many, if not most, of its recent high school graduates. Furthermore, there is concern that there are particularly low rates of college attendance and high rates of unemployment for certain racial/ethnic minorities among the state's high school graduates. Whether or not the concern is based in empirical fact, the concern still exists.

The present study, then, would seem to be applicable not only to the growing opportunities represented by expanded arenas of post-high school education and new student financial aid programs, but also to present and persistent problems and concerns. This is not to imply that this study is intended to provide solutions to the problems indicated above. The findings generated will provide information presumably useful

to decision-makers in the public secondary and postsecondary sectors in Arizona. Their policies and decisions may well utilize these findings, but will be based ultimately on political, economic and social, as well as educational, considerations.

Background of the Study

This study was authorized by the ACPE in the summer of 1975. The Commission was established by Executive Order of the Governor's office pursuant to Section 1202 of the Education Amendments of 1972. Under this state and federal mandate, the Commission was to be "broadly representative" of all segments of postsecondary education in Arizona. This meant that it was to represent lay citizens, the traditional sectors of higher education (universities, private colleges, and community colleges) and public vocational and private proprietary institutions. While the Commission was to act as an administrative agency for several of the Federal titles in educational programs, it was also to conduct a statewide planning function funded under the following section (1203) of the Amendments. This Section authorized grants to the Commission which would enable it to have studies conducted which would include

> ...all public and private secondary educational resources in the State, including planning necessary for such resources to be better coordinated, improved, expanded, or altered so that all persons within the State who desire, and who can benefit from, postsecondary education may have an opportunity to do so. (Report No. 92-798, 92nd Congress).

Furthermore, Commissions such as the ACPE were specifically urged to conduct comprehensive studies which could lead to better utilization of the state's educational resources by Dr. John Phillips, an Associate Commissioner of the U. S. Office of Education (as quoted in Fenske and Romesburg, 1975). He indicated that the enabling legislation mandated such commissions to appropriately utilize

> ...existing agencies or organizations to make studies, conduct surveys, submit recommendations, or otherwise contribute the best available expertise from the institutions, interest groups, and segments of the society most concerned with a particular aspect of the Commission's work. (Section 1202[b] Report No. 92-798, 92nd Congress).

Accordingly, the Arizona Commission issued a Request for Proposal in June, 1975 which solicited the interest of appropriate research agencies to carry out a statewide survey of the postsecondary educational plans and a postsecondary educational financial needs assessment of Arizona high school seniors during the 1975-76 school year. A total funding level for the project was indicated as $15,000, however, prospective bidders were informed shortly after the Request was issued that, due to unexpected budgetary constraints on the Commission, only $5,000 would be available for the projected purpose over the following fiscal year. The Center for the Study of Higher Education (now the Center for Higher and Adult Education) at Arizona State University agreed to conduct a pilot study for the overall project during the academic year 1975-76. This was part of an overall plan submitted, and accepted by the Commission staff, that calls

for the pilot study to be regarded as the first phase of a two-phase study with a comprehensive survey to be conducted in the academic year 1976-77 based on the guidelines established during the pilot study. Since such a survey had apparently never been conducted in Arizona, it was evident that a pilot or exploratory study would enhance the successful implementation of a full-scale survey. Thus, the budgetary cutback was turned to advantage by utilization of a strategy calling for both planning and implementation phases to the overall study. The results of the pilot study are briefly reviewed following the next section of this chapter.

Objectives

Extensive consultation between the project staff and the Commission staff delineated the objectives of the overall study based on guidelines provided in the Request for Proposal and the proposal submitted by the Center for the Study of Higher Education.

As further detailed in the final report of the pilot study: "The study of post-graduate plans of Arizona high school youth is intended to provide a data resource potentially useful to all citizens and institutions of postsecondary education, to manpower and employment agencies, and to Arizona's high schools for use in improving academic programs and counseling.

"In addition to this principal objective, the overall study is expected to produce several other directly useful outcomes as follows:

"1. To determine and document the post-graduate plans of Arizona high school youth.

2. To obtain data useful to postsecondary systems and institutions.

3. To develop baseline information against which to measure changes and to determine trends.

4. To establish a basis for detecting differences in the plans of high school seniors and the courses of action taken after the seniors graduate.

5. To obtain data useful to guidance counselors in advising high school seniors during the time that post-graduate plans are being developed.

6. To provide information that will contribute to the development of postsecondary educational and training programs that are responsive to the aspirations and needs of Arizona's high school graduates.

7. To furnish postsecondary institutions with information to assess admissions procedures and financial aid policies.

8. To assist the planning activities of various Arizona educational agencies including the State Department of Education." (Fenske, 1976).

A preliminary review of literature in preparation for submission of the proposal had revealed a considerable number of other states that had conducted statewide surveys of post-high school plans and had evidently found them quite useful for both postsecondary educational and manpower planning. It was felt that the advent of the Commission had provided Arizona with both an instrumentality and an opportunity to accomplish statewide studies which would comprehend the broadened perspective of postsecondary resources in this state. Thus, it was felt that Arizona could take this opportunity to join the ranks of other states that have

conducted research on the vital area of transition from high school to postsecondary educational and employment careers.

The Pilot Study

The overall objective of the pilot study was to provide guidelines, instrumentation, field experience, analytical models, and a data base which would effectively and completely prepare for the large-scale study.

It was essential to develop conceptual parameters for the overall study because a global consideration of the transition from the secondary school system to postsecondary educational opportunities, employment, and other activities, was far too broad to be encompassed by any single survey. A thorough review of the research literature resulted in the development of these guidelines and also produced the comprehensive bibliography included as Appendix I in the final report of the pilot study (Fenske, 1976). As will be seen, this literature review and bibliography were updated and expanded for inclusion in the present report. In addition, a specific sampling strategy was developed not only to test the data gathering instrument but also to reveal, through stratification of the sample, important differences by geographic region, size of high school, and racial/ethnic composition of the graduating class.

A principal specific objective was to develop and test instrumentation for use in the overall study. Numerous questionnaires from other state studies were examined and a large item pool generated in accordance with the conceptual

parameters and factors related specifically to secondary and postsecondary education in Arizona.

Since the data-gathering instrument was field-tested in the pilot study, this experience proved to be an invaluable aspect in determining the strength of the sampling approach, a thorough test of the questionnaire, as well as direct experience in contacting, inviting, and working with Arizona high schools in actual administration of the questionnaire and transmittal of the data.

Finally, it enabled the Project staff to establish data processing techniques that were useful and applicable in handling the much larger mass of data generated in the overall study.

Briefly stated, the pilot study entailed development of a specially designed questionnaire for administration in the schools by either teaching or guidance personnel. Thirty schools were selected for participation in Phase I through a sophisticated sampling design developed by consultants which would represent the strata of size of high school, racial/ethnic composition of the high schools, and geographic location in terms of urban versus rural setting. The purpose was not to generate data which would reflect the post high school plans of Arizona seniors generally, but to comprise a true pilot or demonstration phase which would lead toward successful conduct of the overall study. In each of the thirty schools, two civics classes (Free Enterprise or American Government) were randomly selected from each of the thirty

schools in the first stage of sampling. School administrators were contacted and virtually all of the first thirty schools agreed to participate. Two substitutes were necessary because of scheduling difficulties.

The questionnaire which was administered by the civics teachers in the respective schools was developed after an extensive review of literature, with special attention to reports of other state studies of post-high school plans. A large item pool was eventually developed and incorporated in a questionnaire which would be somewhat larger than the questionnaire finally used. In general, the approach was to consider the transition or flow from high school to post-high school activities as consisting of three distinguishable and mutually exclusive streams: (1) those who did not plan to participate in further education after graduation, (2) those who planned to attend a trade, technical or business school to prepare for a career or occupation not requiring a four-year degree, and (3) those who planned to attend a college or university program leading to a four-year baccalaureate degree.

Thus, the three plan "streams" defined the conceptual parameters and organized the research activity for the overall study. The questionnaires were mailed to the individual schools and returned by including a postage-paid envelope. Progress of the administration of the questionnaires was monitored by telephone calls during the process.

The results of the pilot study included the following: (1) the development of the conceptual framework for the overall

study, (2) review and organization of the vast research literature in this field, drawing upon items from the fields of sociology, psychology, economics, and educational research. (3) The generalized research design after thorough testing was found to be completely workable for the overall study. Minor problems indicated necessary changes for the larger study. (4) The sampling design utilized for the pilot study gave confidence in the results obtained, furthermore, it proved to be most useful because budgetary constraints required large-scale sampling to be used in the overall study rather than the anticipated census. (5) The development and testing of the questionnaire was most certainly a highly useful result of Phase I, since it provided direct experience in selection from a large item pool, item construction and design, and questionnaire layout. Questions that seemed ambiguous or elicited unusable responses were eliminated, as were those that did not obtain responses of research value, for example, those questions to which practically all respondents answered in the same manner. (6) The overall field testing was felt to be successful in that it provided an opportunity to eliminate problems in the administration for the overall study and helped the project staff become acquainted with at least thirty high schools throughout the state. (7) The data gathered was highly useful in determining stability, validity, reliability, and clarity of the items, as well as to test the extent to which the items helped eliminate the conceptual parameters. (8) Data-processing techniques were tested in

the pilot study, although there was relatively little transfer directly to the overall study because the Phase I sample included only 1,183 of the seniors in the thirty high schools and the overall study included more than half of the graduating classes in each of 45 Arizona high schools. The pilot study included the use of key-punching of data directly from the questionnaires, while it was anticipated (and proved to be the case) that optically scanned answer sheets would have to be utilized for the larger study. Nevertheless, both data-processing and analytical procedure became useful guidelines for the overall study.

Chapter II

REVIEW OF LITERATURE[1]

President Harry Truman: "I never went to college. I want every boy and girl in this country to go just as far with his education as his abilities and desires will take him. That is and will continue to be the educational policy of my administration." The occasion for this statement was in 1949 when President Truman appointed Earl McGrath Commissioner of Education.[2]

This same period of history saw a new departure from the traditional laissez-faire attitude of the federal and even the state governments toward access to higher education. College attendance was largely determined by family wealth and background, and circumstances such as the fortuitous location of the family home of a poor but bright youngster within commuting distance of a college. Thus, until after World War II the student mix on nearly all campuses comprised the bright young persons from well-to-do families, the not-so-bright young persons from well-to-do families, and the leavening influence of the scholarship students, largely extremely bright students from lower-income families. If this situation disturbed social consciences, little was done about it until the massive intervention in college accessibility provided by the G.I. Bill. Even then, it was clear that much, if not most, of the motivation for this legislation was congressional concern for preventing the social unrest

and political upheavals traditionally caused by disaffected and unemployed war veterans.

It was during the administration of the populist President Truman that the nation turned its concern and attention toward more permanent solutions to the inequities in access to college. The goal was given in the charge to the President's Commission on Higher Education established in July, 1946.

> The swift movement of events and the growing complexity of our national life and of world affairs makes it imperative, at the earliest possible time, to translate our democratic ideal into a living reality; to eliminate the barriers to equality of educational opportunity; and to expand our colleges and universities to insure that the only factors which would limit enrollment are the ability and interest of the prospective students. (U. S. President's Commission 1947, vol. 2., p. 1).

The goal of eliminating the economic and other barriers to higher education has been restated many times. Fife (1975) listed seven typical examples, including the following statement of the Carnegie Commission (Chronicle of Higher Education, 1971):

> . . .the equality of opportunity has long been promised to all of our citizens. Increasingly, such equality means equality of opportunity to obtain a college education. This is a national promise, and the federal government has a special responsibility to aid higher education in carrying out this promise (December 13, 1971, p. 6).

The other examples cited by Fife included sources as diverse as President Nixon's 1970 message on higher education to the U. S. Congress, and statements by the prestigious Committee for Economic Development (1973), the American

College Testing Program (1973) and the National Task Force on Student Aid Problems (1975).

Over the past twenty years it has become clear that the two main recommendations of the Truman Commission were the principal strategies used to increase opportunity for higher education. These were massive programs of student financial aid, both state and federal, and the provision of hundreds of new commuter colleges, principally two-year public community colleges. As a result, the concept of post-high school education has broadened from the traditional narrow definition of "higher education" to the expansive view of "postsecondary" education described in the preceding chapter. And since the mid-sixties the proportion of high school graduates pursuing some form of postsecondary education has climbed to, and remained at, over half. This level of access to further education approaches the populist goals of President Truman and his Commission. In one sense, the goals have been exceeded, for even they did not seriously contemplate the advent of "open admissions," financial support for all who wish to enroll, regardless of academic ability or achievement.

However, for every major social advance, there seems to be one or more decrements; just as the dramatic improvements in health care resulted in challenging problems in caring for the growing population of old people, so the expansion of educational opportunity has led to at least two major education-related problems. One is the problem of dealing economically and politically with the phenomenon of spiraling

expectations for more and more postsecondary education. Until the concept of widening access to further education is carried to the logical extreme of universal higher education, there will be, by definition, groups of persons who are excluded from participation. Not only do these groups want in, they tend to align with those already participating who want, after access, improved choice of colleges, help in persisting to completion of programs, and assistance in attaining more education, notably graduate education. The second problem generated by the widened access to post-high school education is even broader than the first. Essentially, it concerns the potentially devastating societal impact of overeducation and underemployment. As the proportion of young persons entering the job market with college degrees creeps toward 35 and even 40 percent, the relative advantage of earning a degree diminishes and, some critics maintain, even disappears (Berg, 1971). This is a large and important subject that cannot be explored adequately here, further, it is once removed from the central topic of transition from high school to immediate postgraduate activities. Nonetheless, it is worth considering as a prelude to examining the pertinent research literature.

The remainder of this chapter is organized into six sections, namely, (1) general studies of transition from high school to post-high school activities, (2) other statewide surveys similar to the present study, (3) research literature focusing on transition from high school to four-year collegiate

programs, (4) those focusing on transition to two-year vocational-technical programs, (5) the transition to work and other non-educational activities, and finally, (6) a brief survey of research literature on the impact of student financial aid on the transition process. The reader is also referred to the extensive bibliography (Appendix A) of some 343 entries which is organized in the same pattern.

General Studies

The transition from high school to postsecondary education or other activities has been discussed from many perspectives, for example, in terms of flows of students (Baird & Holland, 1968) and demand for higher education (Radner & Miller, 1970); in terms of background predispositions of students (Trent & Medsker, 1968); and in terms of mutual attraction and selection by postsecondary institutions and students (Astin, 1965).

Trent's review of the research literature (1970) did much to not only reveal the multifaceted nature of the decision about post-graduate activities but also underscored the idea that it is a long-term process, beginning probably with the earliest acculturation of the child in the home. Trent points out that probably only one major study, the SCOPE study, was designed to trace the decision-making process regarding post-high activities as a developmental and sequential process. In general, however, most of the research has dealt with only one or a small number of individual factors. Trent indicates that most of the factors related to the decision of whether or not to go to college, were also related to the matter of which

college to enter. These factors include major indices of socioeconomic status, personality, intellective factors, environmental factors (such as the local availability of the college), motivational and process factors (such as counseling efforts).

Much has been written about the relationship among the decision to go on to college, local college availability, and the choice of college, especially as such availability seems to have differential effects according to socioeconomic status. Knoell's AACJC study of the community colleges in Philadelphia, St. Louis, San Francisco and Dallas-Fort Worth are a case in point (1970). She reports that:

> The local community college appears to be a much more critical factor in college attendance among black graduates than among whites except perhaps in St. Louis where the district operated three campuses in 1968 (p. 47). The community college is accessible to both black and white students in each city, in terms of its location. However, the colleges differed significantly with respect to other aspects of accessibility. These include not only availability of facilities for all who qualify for admission, but also cost, admissions standards, and comprehensiveness of programs (p. 48).

In another study a sociologist and an economist joined forces to analyze data pertaining to the relative influence of a Miami, Florida community college on college going and college choice (Tuckman and Ford, 1972). Like others, they concluded that local availability had an increasingly powerful effect on choice of college as one moves down the SES scale. In addition to many other findings, they offered these insights: "interestingly, the future financial benefits from attending a college do not appear to have a direct

effect on student choice" (p. 48). Also, in a discussion of the interaction of price and college, the authors offer the following: ". . .care must be taken in interpreting the role of price. The appropriate interpretation seems to be: the higher the price of the college considered by a student, the more likely he is to go to college. The incorrect interpretation is that as price increases, more students will go to college" (p. 82).

In their report of a study of approximately 10,000 high school seniors of 1959, Trent and Medsker (1968) argued that social status had more bearing on college attendance plans than academic ability. They pointed out that a strong relationship existed between college plans and the educational level of parents, and that there was a marked difference between college attenders and non-attenders in terms of academic motivation and parental encouragement. Peer influence was likewise shown to be important.

The SCOPE project--School to College: Opportunities for Postsecondary Education--was a five-year longitudinal study of high school students initiated with the senior class of 1966 in 4 states: California, Illinois, Massachusetts, and North Carolina. The 1966 senior class has provided the data base for a number of studies, both economically and social-psychologically oriented. Tillery's (1973) report on the Distribution and Differentiation of Youth analyzed the 1966 seniors from multifaceted dimensions of academic ability, perceptions and attitudes, timing of decisions, financing of

education, racial distrubtions, and socioeconomic factors. "What students do after high school is highly congruent with the expectations of their parents, and, in turn, parental expectations are clearly related to social stratification" (p. 153).

The SCOPE report on the 1969 senior class as they were followed the ensuing fall analyzed the variables of Educational Goals, Attitudes and Behaviors (Tillery & Kildegaard, 1973) through multivariate analysis of variance and discriminant analysis of each state grouping by sex, race (Caucasian and non-Caucasian), and level of educational aspirations. One important finding regarding barriers to continual education was that some factors--such as academic motivation, lack of encouragement, and wanting to get married--known to be related to college attendance and persistence were not highly related to educational aspirations of high school seniors. Another insightful finding was that although aspirations were influenced by economic factors, economic barriers were not perceived by noncollege aspirants but rather by college aspirants. This insight lent additional support to the idea that economic factors were only one of the determinants of college attendance at the turn of the decade (pp. 157-162).

Sewell and Hauser (1976) pinpoint socioeconomic origins as "the key variable in the [higher education] attainment process because it serves both as a status variable of considerable importance in its own right and as a major facilitator of achievement in the occupational, economic, and social

spheres. . . The effects of socioeconomic background operate independently of ability and for both sexes at every stage in the higher education process" (pp. 13-14).

Considering higher education per se, Sewell and Hauser (1976) found "enormous differences in the educational attainment of the socioeconomic groups . . . regardless of how broadly or restrictive educational attainment is defined" (p. 13), whatever measure of socioeconomic status (SES) is used--parental income, education, or father's occupation. Their findings, based on Wisconsin data, are almost a truism in the relationship of SES and college-going behavior: sons and daughters from families of high SES attend college in greater proportions than children from low SES backgrounds (Medsker & Trent, 1965; Mulligan, 1951; Sewell & Shah, 1968; Tillery, 1973). An analogous relationship holds for SES and attendance in prestigious institutions (Tillery, 1973). For example students from higher income schools of the Los Angeles area in 1974 had a greater participation rate in postsecondary education in general and also in more prestigious institutions (Fuller, 1976). Information on the income levels of high school attendance areas was generated because of a lack of direct data on students' family income, not to show high school effects. High school effects on aspiration and activities are rather small, accounting for very little variance above and beyond individual social, psychological, and academic factors (Hauser, Sewell, & Alwin, 1976).

SES--when measured by mother's and father's education,

parental income, and father's occupation--is an important variable in the attainment of postsecondary education. Academic ability--independent of SES--accounts for a substantial portion of variance. High school performance, significant other's influence, and education/occupational aspirations intervene and mediate the effects of SES and academic ability. When all are taken as a group, over half of the variance of educational attainment is accounted for (Sewell & Hauser, 1976).

Tillery (1973) argued that high school graduation is a time when "First Brandings" are made as to directions, not irreversible, for future activities. High school seniors' plans--or lack of them--have an impact on their immediate, and perhaps long-term, future. Individual plans are made within the context of one's abilities, attitudes, and motivations; within the context of temporal and spacial dimensions; and within the context of a socio-cultural setting.

In one of the most ambitious national studies of graduating high school seniors since Project Talent of the mid-sixties, the National Center for Educational Statistics surveyed nearly 18,000 seniors in over 1,000 schools across the nation in the spring of 1972. The study was called the National Longitudinal Study, and was intended to gather baseline data on graduating seniors who would be surveyed periodically throughout their post-graduate careers (Fetters, 1974). Fifty-nine percent of the respondents planned to attend college or a trade or business school full or part time. The percentage of seniors in an

academic program who planned to attend a postsecondary institution was 84%; in a general program, 44%; and in a vocational-technical program, 33%. A similar percentage of boys and girls planned to attend college (59% to 61%); more whites than blacks had postsecondary education plans (61% to 56%).

Most students thought they had "a great deal of influence on own plans" (91%); next were parents (43%); then friends (25%). The decision of whether or not to attend college was made by the end of the 9th grade by 42% of the respondents; in 10th or 11th grade by an additional 20%; in 12th grade by 19% more, and 19% were undecided at time of the survey. About 41% of all seniors felt that they or their parents could pay for more education without any financial aid; however, only 29% of blacks so indicated. Of the 41% of the seniors who did not plan postsecondary education, almost 26% planned to work full time, and of these, about one-fourth intended to continue schooling part time. Reasons given for not continuing education included "not requiring more schooling" (48%); "want to take a break" (44%); "need to earn money before affording further education" (34%), and "don't like school" (29%).

More boys (65%) had definite jobs to enter after graduation than girls (39%). About 31% of students with college intentions planned to attend 2-year institutions; 65% were considering 4-year colleges, and 4% were undecided. Blacks planned to enroll at 2-year institutions at a rate of 23% and at 4-year colleges at 73% with 4% undecided.

State Studies of Post-High School Plans

Many states have conducted annual or periodic studies of the post-high school plans of graduating seniors. For example, Florida has conducted annual surveys since 1962; Wisconsin surveyed its seniors in 1958, 1968 and 1975; Minnesota also conducted surveys in 1957 and 1966; Hawaii has surveyed its seniors on a biennial basis for eight years, and Indiana surveys its high school graduates every three years (1966, 1969, 1972 and 1975). Most other states have conducted at least one such survey. The following review of literature is a sampling only of major trends and findings. The bibliography (Appendix A) lists 71 sources consulted for this review.

Indiana. Lisack (1973) analyzed trends in post-high plans of Indiana seniors based on surveys in 1966, 1969, and 1972. He found that a declining percentage of seniors planned full-time postsecondary education over the six-year period (from 46% to 39.9%). Increasingly Indiana high school graduates planned to enter employment directly, further indicating that they planned later to seek career-type education. Both lack of money and lack of interest in further schooling were cited as reasons for this trend.

Another study utilized an especially designed 22-item questionnaire distributed to all Indiana University freshmen during the fall semester, 1970-71 (Bowers and Pugh, 1971). A factor analytic type of analyses revealed that "combined, the responses indicated that the same basic factors underly

the decision process for both parents and students, although they differed in the relative importance attached to each factor. Financial considerations, geographical location, and academic concern were 'parent' factors; while social and cultural opportunities and advice of other people were 'student' factors" (p. iv).

In general "financial, geographic, and academic factors are more important to parents than to students, while students attach greater importance to Social and Cultural and informal advice factors" (p. 31). These researchers found that students attach a great deal of relative importance to the advice of others, particularly family members, Indiana University alumni, and high school teachers.

Florida. Howard P. Tuckman and W. Scott Ford (1972), in a study done at the Institute for Social Research, Florida State University conducted a comprehensive study of high school seniors and of graduating junior college students to determine the factors which affect a student's post-high school and post-junior college plans, with particular emphasis on how the location of universities affects a student's choice. Of particular interest is the process by which distance affects the price of college.

The research findings were based on data collected from more than 3380 students in Dade County, Florida: 930 junior college students and 2453 high school seniors.

The findings are: Large number of students wish to remain in Dade County to continue their education. Financial reasons

are the most important reasons give by high school seniors for not leaving the county. 52.2% of the students mention either the lower costs of college attendance or the availability of jobs as the most important reasons for attending Dade county schools (p. 11).

In a series of annual surveys beginning in 1962 (Florida Board of Regents, 1972) surveys in the more recent years revealed considerable stabilization of trends as follows: "The survey of 1968 revealed that a substantially higher percentage of white students intended to enter community colleges within the state than black students. The survey for 1969-1970 and 1971 revealed no pronounced change in the 1968 data. Both white and black students exhibited about the same interest in out-of-state colleges in 1971 as in 1968. White students showed a stabilized interest in private colleges and universities in Florida over the four-year period, in contrast to black students, whose interest declined. The percentage of white students hoping to enter public universities in Florida remained at the same level over the four-year period, while the appeal of public universities for black students grew slightly stronger" (p. 12).

In fall 1970, 20.1% of students attending public universities thought that the availability of a strong program in their intended major field was the most important college choice factor. Choice factors of secondary importance were: (a) close proximity to home (18.6%); (b) academic reputation (14.9%); and (c) campus/social environment (14.1%). Students

attending private universities ranked all factors in a similar manner except (b) academic reputation (17.5%) and (c) campus/social environment (25.6%), which received higher ratings.

Wisconsin. Lins (1969) reported the following findings concerning a statewide survey of 1968 Wisconsin high school seniors: Wisconsin high school seniors were asked on a questionnaire to indicate which factors most influenced their college choice. Factors listed were: family, distance, finances, school size, friends, course offerings, and activities. No one factor conditioned college choice. Of the seniors questioned, 54% did not cite size of school as a reason for entering their chosen institution. Those concerned most about school size were those planning to enter a private liberal arts college. Only 30% of the latter group did not indicate size as an important consideration. Of those desiring liberal arts college attendance, 56% cited size as important.

Lins' study also revealed that generally more men than women attended part time. Vocational/technical schools enrolled the largest proportions of part-timers. One-tenth of students enrolling in school out-of-state expected to be part-time. The Madison campus of the University of Wisconsin expected a high proportion of its new freshmen to rank in the top quarter of their high school classes. About 67% of Madison-bound seniors were so ranked. Over 90% of those Madison-bound students ranked in top half of high school classes.

In a similar study conducted of 56,764 Wisconsin seniors in 1975 (Lambert, et al, 1975) about 30% reported they will attend a public college, 7% planned to attend a private college, about 30% were intending to work full time, nearly 16% were considering a public vocational education program and only one per cent were planning to attend a proprietary school. Other miscellaneous plans (travel, homemaker, military service) accounted for the balance of the seniors' plans. About 80% were either "generally" or "quite" sure of their plans, and over 53% of the seniors had made their plans earlier than the final year of high school.

District of Columbia. A structured questionnaire was administered to a "post-stratified random sample" of District of Columbia high school seniors in June, 1971. The 1,224 seniors from seven schools represented about 1/4 of the senior class, which was 90% black and 8% white. There were more females than males in the sample (The BLK Group, 1971). The purpose of this high school senior survey was to generate information for some of the primary factors to be considered in designing a comprehensive higher education plan for the District of Columbia.

Approximately 71% of the seniors intended to continue their education--77% of the males and 67% of the females. The median family income of students who planned to attend public colleges was lower than those who planned to attend private colleges. One-third of those who planned to go to college wanted to continue at public colleges for the

following reasons: low cost, living at home, easier transition from high school, and quality of instruction. Two-thirds of those who planned, wanted to go to college elsewhere, partly because of lack of information about the public colleges and partly the belief that going away to college was more beneficial. Of those seniors who did not plan to continue college immediately (29%), 44% indicated that they would attend if necessary funds were available. Even if funds were not available, 67% planned to enroll in college at a later date.

Hawaii. In 1973, a survey was conducted of seniors in all Hawaiian high schools. The report was written as a source for evaluation of secondary education; as input data for postsecondary institutions; and as a description of the employment picture of students entering the labor force (Hawaii State Department of Education, 1975). The survey resulted in 10,168 usable responses, or 77.6% of the 13,018 graduates of 1973. In the fall of 1973, follow-up questionnaires were mailed to all who had completed (and addresses available) the spring survey. The follow-up resulted in 4,932 returns, a 48.5% response rate. There "were serious sample biases in both the surveys" (p. 2). Most important bias was the tendency of those in low quintile ranks to return surveys much less frequently. The follow-up picture was also confounded by low return rates for those with non-academic plans.

About 75% of the graduating seniors had plans to continue educational pursuits. There were more females than males,

more private than public graduates, and more higher than lower quintile ranked students planning to continue. About 76% planned to stay in Hawaii with proximity of college an important reason for this decision. The most frequent sources of help in making plans for the future were parents (33%), then counselors (22%), friends (17%), and others (mainly self) (16%).

About 16% of the graduating seniors had non-academic plans and 8% did not have specific plans. These students indicated no interest or need of further schooling (18%), or wanted to take a break, then return (28%). Insufficient funds were indicated only 6% of the time as a reason for not continuing.

Of the graduating seniors 37% planned to enroll at 4-year institutions and 19% in transfer programs at community colleges. Of the seniors who planned to continue, 49% planned to attend a 4-year institution and 25% a 2-year college transfer program.

About 17% of the graduating seniors planned to enroll in vocational-technical programs at community colleges and another 3% at private occupational schools. Of those seniors continuing their postsecondary education, 22% planned to enter a community college vocational-technical program and 4% a private occupational school.

Idaho. Two closely related studies were conducted on the post-graduate plans of 1971 high school seniors. The first report focused on seniors who planned to continue their education; it identified reasons given for preferences for

in-state/out-of-state and curriculum selection (Lingren and Eyre, 1972). The second report validated enrollment projections from the intention survey as indications of actual demand upon higher educational institutions (Eyre and Lingren, 1972).

A specially-designed questionnaire was administered in May 1971 to about 10,600 seniors, approximately 81% of 11,900 presumed enrolled seniors. Responses from high schools ranged from 45% to 100%. The report assumed those who did not answer would have responded proportionately in like manner. A second questionnaire was given to all entering freshmen in August of 1971 at both public and private higher educational institutions. Lack of standardization of survey administration resulted in 55% of freshmen Idaho residents responding to the instruments. Response was less than 50% at two colleges with the largest enrollments.

The spring intention survey indicated that about 73% of the seniors planned a postsecondary education. Reasons chosen for selecting a college were personal influences (parents, friends, etc.) 34%; finances, 18%; and location, 16%. Except for the University of Idaho, finances and proximity were given as reasons by over 40% of the respondents.

About 64% of the seniors planned to attend a degree-granting college or university. Almost 83% of the college-bound seniors planned to stay in Idaho. (Over 43% of the out-of-state bound planned to attend school in Utah.) Almost 77% planned to attend public Idaho institutions--85% at 4-year institutions and 15% at 2-year. Over 23% planned to attend

private institutions with about 90% of these planning on a specific church-related 2-year college. Of those planning on further education in a college, 68% planned to attend a four-year college and 32% a two-year institution. 84% planned to enroll full time (8 or more credits) with 71% planning an academic program.

About 10% of the seniors planned to attend a private business or trade school. Of the college-bound seniors, 15% planned to take a vocational-technical program. Females' plans (12%) for private vocational-technical schools were double that of males'. The fall follow-up survey showed a slight decrease in selection of vocational-technical programs and the matched sample also showed a shift to an academic program, although this was probably an artifact of sample bias.

Of the graduating seniors, about 17% planned to get a job while 4% planned to enter the military. Of the seniors not continuing their education, only about 35% indicated any interest whatsoever in a continuing education program while 50% didn't know if they would be interested.

Iowa. The College Entrance Examination Board conducted a survey of the post-graduate plans of Iowa seniors in 1975 for the Higher Education Facilities Commission (College Entrance Examination Board, 1975).

A representative sample--with special attention to geographical distribution and school enrollment--of 49 schools enrolling 12% of the 1974-75 seniors was selected to administer

the Survey of plans for education and careers. The 88-item instrument was completed by 5,766 seniors during January and February of 1975.

Over 60% of the respondents planned to enter a post-secondary institution. About 73% planned to enroll in an Iowa institution; of these, 73% (up 1% since 1969) planned to enroll in a tax supported (public) institution. About 19% planned to enroll out-of-state; of these about half identified a tax supported facility. Of those students who planned to enter school, 29% hoped to achieve at least two years or less of postsecondary education; 65% hoped to achieve at least a bachelor's degree.

Although 98% of the schools in the survey were predominately white, the postsecondary plans did not appear to differ in non-white schools. There was no significant difference in general plans by sex. City size was directly related to post-high school planning with a less definite (though still positive) relation between class size and postsecondary education plans.

There was a high positive correlation between high grades/high family income and plans for postsecondary education. Even though there was a direct relationship of class rank and future plans, almost 30% of the non-educational planners were in the top 40% of their class.

One of the general conclusions of the report was the following:

> Parents' occupation, the extent to which parents are "directive" in relation to their children's post

> high school plans and student self-perceptions with respect to career-related characteristics seem to be at least as reliable predictors of post high school planning as do program of study, academic performance and family income (p. 69).

Students not planning to continue had a "consistently lower self-esteem pattern than do the students who plan to continue" (p. 14), especially into 4-year institutions. Although students from higher income families are more likely to continue, almost 40% of the non-college bound youth was from the middle and upper income levels. Students who did not plan to continue had the least directive parents. Those not planning to continue indicated as reasons a desire for money, indecision about career choice, and a confidence that they could be admitted later on. High school grades, parental financial resources and institutional restrictive admission policies were not major influences.

Of the total sample, more males (41%) planned to enter a 4-year college than females (37%) but more females planned to enter a 2-year college than males (11% to 7%). Of those students who planned to enter Iowa schools, 40% planned to enroll at public 4-year institutions; 22% at private 4-year facilities; 30% at area community colleges and vocational schools; and 3% at private 2-year schools. Among those planning to enroll immediately, there were many and varied reasons for selecting a particular institution. Students tended to underestimate costs and generally planned to work during the first year of college. Although most planned to lean heavily on financial support from parents, continuers

generally had some savings and planned to work during the summer.

Of the total sample, more females planned to enter vocational-technical postsecondary institutions than males (14% to 12%). Of those who planned to continue their education, 5% planned to enroll at private business/vocational schools.

New Jersey. A series of two studies of the 1976 high school seniors in New Jersey were conducted to establish a data base for further longitudinal surveys, much like the National Longitudinal Study described in the preceding section (New Jersey Department of Education, Report No. 1, 1976; Report No. 2, 1977). The specially-designed questionnaire was administered to 15,228 seniors in 57 schools.

Of the students completing the questionnaire, 48% planned to attend a 2- or 4-year college or university, 30% planned to work full or part time, 7% planned to attend a proprietary school, and 5% felt that they would enter the military or take a break. The majority of seniors (about 64%) reported that they were employed at paying jobs while in high school. Students indicated that their work was not related to their studies and was not leading to work planned for the future. Parents and other relatives were the most influential factors in students' planning for the future.

Students planning to attend a junior or community college, a 4-year college or university, or take correspondence courses, comprised the plurality (47%) of those students with definite plans. This decision had been made by 42% of the students

sometime prior to entering 10th grade. Responding to a question concerning most likely plans for the next year, 31% indicated attending a 4-year college or university and 8% indicated that they would be taking academic courses at a 2-year college. Another 2% planned to take technical or vocational subjects at a junior or community college.

Over 7% of the respondents planned to take vocational or technical courses at proprietary schools. Sixty-nine percent had already selected a particular school to attend. Course offerings, specific training programs and other areas of special interest were the main reasons for choice of a particular institution. Nearly 61% of the students with technical or professional career goals chose this response as an influential feature of a particular school.

Students planning to work full or part time comprised nearly 30% of the respondents. Additional students planned to enter an apprenticeship (2%), the military (4%), become a homemaker (0.5%) or had other plans (2%).

Of those planning to work, nearly 46% were employed when the survey was administered. However, only 36% planned to continue at their present job after graduation.

North Dakota. The American College Testing Program conducted a survey for the North Dakota Postsecondary Education Commission of the state's 1976 graduating seniors (The American College Testing Program, 1976). A stratified sample of 2,987 high school seniors from 88 schools participated.

Over 60% of the 1975-76 seniors planned to continue some

form of postsecondary education. Of those continuing, about 52% planned to attend a state-supported college or university; 3% an independent college; 11% a community college; 1% hospital schools; 4% proprietary schools; 14% an out-of-state school; and 16% were undecided. The most common reasons for seeking further education were: to prepare for a career (65%); to be able to earn more money (43%); to choose a suitable occupation or career (41%); and to find job satisfaction other than money (32%).

Of the seniors surveyed, about 14% planned to begin work, 4% to enter the military, 2% to become homemakers, 13% had no plans and 7% other plans or reasons.

Of those respondents planning postsecondary education, 28% aspired to a 2-year or vocational/technical degree; and 16% wanted a vocational or technical program of less than two years.

Oregon. The Oregon Educational Coordinating Commission has conducted annual surveys of post-high school plans since 1970. The most recent report available summarized the 1975-76 survey (Oregon Educational Coordinating Commission, 1976).

The information for a fall 1975 survey was completed by 75% (24,960) of the public and private high school seniors.

As in the previous four years, 64% of respondents planned to continue their education following graduation: 39% planned school only and 25% planned work and school. Of those planning to continue their education, almost 52% preferred public colleges and universities; 25% preferred community colleges; and 9% preferred independent colleges.

About 14% of the respondents planned to enter vocational-technical programs in public or private (proprietary) schools.

Of the total respondents, 23% were planning to work only; 4% were planning to enter the military; and 9% had other plans. Of these, about 12% indicated they could not afford to go to school, a similar percentage as in the previous four years. The grade point distribution of those who were going to work ranged from 48% having below a C grade; 67% having a C grade; and 25% having above a C grade.

Tennessee. The Tennessee Higher Education Commission conducted an analysis of the postsecondary plans and aspirations of Tennessee high school seniors in 1974 (Allard, 1975). Almost 80% (43,392) of the state's graduating seniors responded to a specially-designed questionnaire.

Nearly 57% of all students surveyed indicated that they would be in school the fall after graduation (50% full time, 7% part time). The educational aspirations of men were higher than those of women, both proportionately and to higher levels. A greater percentage of blacks planned to enroll, but those continuing were more likely to plan for two years or less schooling than were white students. There was a positive relation between family income and educational aspirations--both in plans and in number of years. Size of community, high school average, and educational attainment of fathers were similarly related. Over 68% of the students who had planned to attend school had done extensive planning. Vocational and career considerations were important in students' decisions to continue schooling.

Of the students who planned no further education, desire to start work and a disinterest or lack of need for further education were identified as important in the decision not to continue.

About 15% of the seniors planned for vocational-technical types of programs. Equal numbers of males and females made such plans. Of those continuing this type of schooling, there were 7% more blacks, 9% more rural seniors, more students with lower grade point averages (D-36%; C-27%; B-17%; A-8%), and more students from lower income families (below $6,000- 28%; $6,000-$12,000- 20%; above $12,000- 11%) with vocational-technical plans compared with those planning baccalaureate programs.

Utah. The Utah State Board of Education conducted annual surveys of post-high school plans of seniors in 1972, 1973, 1974, 1975 and 1976 (Utah State Board of Education, 1976). The trends showed a decline in the percentage of those planning for post-high school programs. The percentage of those reporting such plans was 72% in 1972, 67% in 1973, 65% in 1974, 66% in 1975 and 65% in 1976. The percentage planning to work ranged from 20 to 22% through this period, while those reporting "other" plans such as travel, homemaking, etc. increased from 5% in 1972 to 12% in 1976. The major reasons for selection of the college or university designate by the respondents were, respectively, curriculum, proximity to home, religious or family influences, or finances in each of the five annual surveys. The major reasons for not planning further education

were "no interest," "finances," or "already have good employment," respectively, in all of the surveys.

Transition From High School to College

As discussed in the introduction to this chapter, much of the federal and state government policy since World War II regarding higher education embodies widening access to colleges and universities and, more recently, to other types of postsecondary opportunities. Consequently, the bulk of the research literature deals with the transition from high school to the colleges and universities which comprise the traditional sector of higher education. Most of the studies can be categorized as dealing either with access to or choice of college.

In terms of determinants of college-going, numerous studies have explicated the wide range of related factors. Generally, the likelihood of college attendance increases with socioeconomic status and with academic indicators, though not independent of one another. Sewell and Shah (1967) in one of the most comprehensive reviews of the literature ever accomplished in this area, found that both socioeconomic status and intelligence have direct effects not only on propensity for college attendance, but also on persistence and graduation. However, for both males and females the relative effects of socioeconomic status on college plans and attainment were less than the effect of intelligence.

Another important factor was community of residence:

> with each increase in community size category, the percentage of students with college plans increases, ranging from 21.5% for those from farms to 42.4% for those from large cities. Intelligence and socioeconomic status explain most of the differences among girls in this sample, but other factors are needed to account completely for the residential differences in college plans of boys (Sewell, 1964, p. 24).

Specifically, Sewell found in the same study that many academically able boys from rural areas failed to plan on college. Interestingly, the relationship of socioeconomic background to college plans among Canadian youth was similar to that in studies dealing with American youth (Pavalko and Bishop, 1966).

In addition to the intrinsic factors of intelligence and socioeconomic background, some researchers have emphasized the significance of external factors, such as accessibility and financial barriers, which influence college going. For example, Trent (1970) found that

> In 1968, according to a recent study by the Bureau of the Census, a family with an income over $15,000 and with one or more college-age (18 to 24) children is five times as likely to include a full-time college student as a similar family with an income under $3,000. This underrepresentation of relatively lower-income families becomes progressively worse as the level of education progresses into graduate studies. Another study estimates that, after allowing for ability differentials, the number of college graduates would have increased by 50% in a recent year (1965) if entrance and completion rates throughout the income range had equaled those in the top one-fifth on the basis of socioeconomic status (p. 2).

In terms of choice of college, many researchers have identified strong relationships between selectivity and

prestige of institutions and the same types of variables related to college-going, namely socioeconomic status and academic factors. In a massive review of literature Medsker and Trent (1972) found that

> Of the graduates attending private universities, by far the largest percentage came from the top-ability quintile. Next in order to selectivity were the private 4- or 5-year colleges, and after them the public universities. On the other hand, the multiple nature and "open door" policy of the 2-year public college are manifested by the spread of ability among its students. It is noteworthy, however, that a fourth of its students came from the top quintile. The state colleges and the extension centers each drew from student ability levels in about the same way (pp. 41-42).

In an earlier review Trent (1970) had noted that the distributions of nearly all relevant variables are positively related to type and level of colleges, from public "open door" types of public community colleges to highly selective private universities.

Generally, the greatest single factor in increasing access to higher education is the recent mushrooming of numbers of public two-year colleges. Cross (Department of Health, Education and Welfare, 1970) discussed the role of the community college in the increasing universality of post-secondary education. She found that to a large extent the public two-year sector was growing more rapidly than other parts of higher education due to its success in removing the external factors alluded to above. This has had the effect of attracting many students who would not have otherwise attended more traditional types of institutions.

Ferrin (1971) found national indicators of increased accessibility of higher education that included: (1) the increase in the numbers of all institutions from 1,890 in 1958 to 2,596 in 1968; (2) the proportion of freshmen attending public two-year colleges doubled from 20% to 40% in these same ten years; (3) the number of free-access colleges, almost all of them public, increased from 538 in 1958 to 789 in 1968; (4) where 30% of the population lived within commuting distance of a free-access college in 1958, 42% did in 1968; and (5) coverage increased significantly in communities of all sizes, except in metropolitan areas with a population of one-half to one million and rural counties of less than 20,000 (p. 59).

In two other national studies Fenske and Scott (1974) found that students entering four-year colleges differed from two-year aspirants in level of educational aspirations, importance of college choice factors, and in family income while similarities between the two were beginning to appear in type of housing anticipated and extent of planned participation in extracurricular activities. They also found that private colleges generally enroll students of higher academic ability and achievement and that family income is substantially higher for students choosing private institutions. On the whole they observed several important changes in students entering college during the period 1968-1972. High school grades tended to be on the rise, while ACT scores declined from 1970-1972. More students were seen to

be pursuing associate degrees and doctorates, but aspirations for bachelor's and master's degrees decreased. Off-campus housing experienced augmented popularity, extracurricular activities had recovered part of their appeal by 1972, and both minority enrollment and overall family income continued to rise (Carmody, Fenske and Scott, 1972).

In 1973 the Bureau of the Census surveyed the post-high school plans of seniors. Of the 3.3 million seniors 45% reported definite intentions of college attendance immediately after high school and 59% of that number indicated that they would pursue the baccalaureate degree. Another 27% of the 3.3 million opted for possible college attendance at a future date. Approximately 26% did not plan to attend a two-year or four-year college at all, although some of them expressed interest in business, technical, or trade schools. The college aspirations of young women closely paralleled those of men in the entire survey, and those of seniors in the West topped the national average for probable attendance by 51% to 45%. As might be expected, two-thirds of the seniors enrolled in private high schools expressed definite plans to enter college in contrast to the 45% national figure. Only 14% of private high school students did not expect to attend college. Among all students who planned to attend a four-year college or university family income was extremely important. Seventy-one percent of those students were living in families with incomes of $10,000 or better, and overall tendency to

choose such institutions rose with the plateau of family income. They also came from more urban than rural households and migrated out of state more readily for their education (Bureau of the Census, 1974).

In a study of student migration in 1966 and 1969 Robert Fenske and Craig Scott concluded that while most students do not migrate out of state regardless of their background characteristics, those who do have a moderate to high family income, no plans to work part time, little fear of potential costs, come from a rural or suburban home community, have educational expectations at or above the bachelor's degree, and often choose an institution for its national reputation (Fenske and Scott, 1972). On the whole student out-migration declined in the late 1960s and early 1970s because states erected barriers of high tuition and aptitude and achievement standards, and as a result of the rapid proliferation of public junior or community colleges which improved local access (Fenske, et al, 1974).

Transition from High School to Vocational-Technical Programs

Enrollment in traditional programs leading to the baccalaureate degree has leveled and, in some sectors, declined in absolute numbers in recent years. However, enrollment in occupational or vocational-technical types of postsecondary programs has continued to grow at a spectacular rate, both in public two-year community colleges and in the non-tax supported proprietary (for-profit) schools (Fenske and Scott,

1973, p. 44). The trend of the times seems to include a substantial concern among youth planning for postsecondary education for the cost-benefit consequences of their decision. The constant media publicity given to the unemployment rates for young persons aged 18 to 24, including many college graduates, seems to result in a careful consideration for employability after completion of formal schooling.

Another factor enhancing the growth of vocational-technical programs is the concern among state governments and at the federal level for fiscal and program accountability. Since vocational-technical programs by nature result in more tangible outcomes, particularly those related to employability of graduates, these programs have been attractive and drawn relatively more support from governments at all levels. There is even considerable support for the notion that both state and federal legislation (for example, the Higher Education Amendments of 1972) is consciously designed to not only specifically support vocational-technical education at a relatively greater rate of increase than traditional programs, but to view them as part of the same milieu (Fenske and Romesburg, 1975, pp. 66-69).

Some researchers have maintained that students in occupational types of postsecondary education do not, in fact, accrue either short-term or long-term monetary or other benefits that compare favorably with those who attend traditional baccalaureate programs. Attempts to analyze differences

have run afoul of the familiar difficulty of disaggregating prior differences in socioeconomic and academic background between students in the two types of programs.

Featherman and Carter (1976) indicate that some forms of postsecondary education may even have a negative effect.

> Apparently, otherwise able young men who choose to go on to non-regular postsecondary schools rather than colleges suffer a career cost, both in terms of fewer certification years of schooling for equal attendance years and in form of a lower status entry point into the full-time labor force (p. 155).

In a spin-off of their major inquiry, Featherman and Carter concluded that college and vocational-technical training in proprietary schools were not functionally equivalent: greater benefits (jobwise) accrued to college graduates. The researchers were not positive whether there were non-intellectual returns of education in form of personality traits and styles marketable upon entry into the labor force, or whether unequivalency was a resultant of employer preference. Their data

> lend no support to policies which would divert scholarships from college and college attenders and share these resources with vocational-technical institutes and their matriculants. Insofar as the rationale for public support of the education of able individuals depends on the quality of the labor force and personal mobility, our data support two- and four-year colleges (universities) as more effective at these tasks (p. 160).

Not only is SES important at every stage of higher educational attainment, the effects of postsecondary education have not been major mediators of the effects of prior background (Alwin, 1976).

In a comparative study of students attending public and proprietary training programs, Wilms (1974) concluded "that proprietary schools recruit . . . students with fewer resources more effectively than public schools" (p. 31), but his analysis indicated that students in proprietary schools have a slightly higher SES (p. 39).

Fenske's (1969) analysis of a sample of Wisconsin 1963 graduating seniors showed two categories of graduating seniors with a high tendency for vocational-technical plans at public technical institutes: (1) seniors ranked in the highest 30% of their class with parents of low occupational and educational status; and (2) seniors in the lowest 30% with parents of high occupational and educational status. Under-achievers planned more for a vocational-technical education than average or high achievers.

Freeburg and Rock (1975) analyzed the aspirations and plans of the 1972 base-year National Longitudinal Survey of high school seniors. High school curriculum was a classificatory variable in the survey. The aspirations and plans of males and females from different high school curricular programs followed response patterns commensurate with SES and expectations those backgrounds would likely impose. Students in an academic program strove for the highest level of education; in a general program, the next highest; and in a vocational curriculum, the lowest. Academic groupings tended to be college-goers who arrived at decisions earlier and expected the highest status and paying occupations. Their

educational plans and aspirations were closer together than the other two curricular groups. However, in perception of their occupational future, the vocational-technical students had a closer match in planning and aspiration.

There were not only differences in educational aspirations and plans--each resulting in different relationships with SES and academic achievement--but there was a difference between the patterns of correlates when contrasted with level of education and occupational decisions. The pattern of correlates also differed when applied to male and female samples.

In his Differentiation and Distribution of Youth, Tillery (1973) provided data on seniors who had enrolled in special schools in the fall of 1966. The special schools were assumed to be proprietary schools.

About 2% of the 1966 SCOPE seniors went to institutions that offered less than 2 years of schooling: Illinois, 1%; California and North Carolina, 2%; and Massachusetts, 3% (p. 26). More females than males were attending these special schools (3% to 1%): Illinois, 2% to 1%; California, 3% to 1%, Massachusetts and North Carolina, 4% to 1% (p. 29).

About 3% of the SCOPE seniors in the lowest quartile of an intellectual predisposition measure went to special schools; in the mid quartiles, 2% each; and in the highest quartile, 1% (p. 48).

SCOPE seniors attending special schools came from families with average or higher than average incomes in all 4

states with almost a third having average incomes (p. 64). The father's occupational level was similar to seniors not attending college in California and North Carolina, and similar to those seniors in junior colleges in Illinois and Massachusetts (p. 59).

The ethnic/racial enrollment pattern of the SCOPE seniors at special schools was 75% white and 25% nonwhite. The nonwhite enrollment rate was almost double the rate at any other level of postsecondary education (p. 79).

Of those SCOPE seniors enrolled in special schools, 60% to 80% were in the lower octiles of academic ability (pp. 86-87). The self-reported grades of these students were largely good and average (80% to 90% of reported grades) and paralleled the self-reported grades of those SCOPE seniors in junior colleges (pp. 94-95).

A 1969 multi-stage sampling survey of students in 7 states with the largest community college enrollments resulted in a 61% usable current student response (Godfrey and Holmstrom, 1970). The following data on full-time students in certificate programs in community colleges, area technical institutes, and vocational-technical centers was extracted from the larger study. Information regarding students in degree programs in area technical institutes and vocational-technical centers was scanned but not included in the subsequent percentages. The percentages of the degree students were similar to the certificate totals, although the percentages differed between the types of institutions in the different programs. Father's

education and occupation, and mean family income were usually higher in the degree program.

The mean age of males in certificate programs in 1969 was 21.09; 43% were between 16-19. The mean age of females was 19.4 and 59% were between 16-19. Male minorities comprised 6% of the male students and female minorities comprised 10% of the female students. Forty percent of the males had earned a B or better in high school and 56% had earned a C. Females had higher high school grades: 71% had a B or better and 18% a C. About 38% of the males were not employed and 60% of the females were not employed.

The American Institutes for Research in the Behavioral Sciences, Palo Alto, undertook a survey of public and proprietary vocational-technical programs, schools, and students in the early 1970s (Wolman, Campbell, Jung, and Richards, 1972). Of the 83 eligible proprietary schools in 4 cities (Atlanta, Rochester, Chicago, and San Francisco), 51 participated in the study. All 14 eligible public institutions in the same cities participated. Student information was based on responses by 3,340 proprietary and 3,610 public students. The authors suggested that, in general, students at public and proprietary schools were quite similar in terms of age, sex, and parental background. There were striking differences in the proportions of males and females among the cities, but the difference related to the kinds of occupational programs offered. Overall, 56% of the proprietary school respondents were male and 46% of the public school respondents were male. About 45% of

both sets of students were under 20. The proprietary schools had 32% of their students categorized as minorities (20% black) and the public school had 42% minorities (26% black) in vocational-technical programs. About one third of the respondents had been out of school a year or less and both groupings had taken similar curricular programs in high school. About half had B's or better in high school and a third were in the C range.

The parental background was analogous for proprietary and public respondents: about half were at least high school graduates; a quarter had some occupational training or college; less than 10% had a college degree. Fathers had a higher educational attainment than mothers. Parental occupation was similar for males and females in both types of schools. About a quarter of the fathers were skilled craftsmen-technicians; a quarter were semi-skilled; and a fifth were professionals-educators-managers. The rate of full-time student status at the proprietary schools was 83%; at public schools, 61%. Students from both types had essentially the same primary goal--acquisition of job skills (80%).

Wilms' 1973 study of Public and Proprietary Vocational Training (1974) was designed to test for "any systematic differences in characteristics and occupational success of public and proprietary school students" (p. 11) across different kinds of schools, geographic regions, and occupations. A random sample of 21 public and 29 proprietary schools (with

2 replacements) was selected from a universe of public and proprietary schools--after ascertaining enrollments and anticipated number of graduates--in Boston, Chicago, Miami, and the San Francisco Bay Area. The 50 schools were asked to identify beginning students as to full- or part-time and diploma or certificate status.

There was a slight, but nonsignificant, difference in age between the public and proprietary beginning respondents. "Ethnicity . . . was significantly related . . . to the type of school a student attended" (p. 36). Whites tended to go to public schools. Blacks were evenly divided between public and proprietary schools. Other ethnic groups tended to be enrolled in proprietary schools. However, when Wilm analyzed students who were about to graduate the previous spring, he found that

> while the trend for each minority ethnic group to favor proprietary schools was not strong enough to be statistically significant at entrance, the difference between White and the other two ethnic minority groups became significant at graduation . . . with the ethnic minorities favoring proprietary schools (p. 53).

Respondents with general or vocational high school curricular experience were just as likely to go to either a public or proprietary school, but graduates of a college preparatory curriculum were more likely to choose a public training program. High school teachers/counselors, and parents and peers were the main source of information about schools for those in public facilities while proprietary students relied more heavily on unconventional sources of information, such as

newspapers, advertising or telephone Yellow Pages.

To conclude this section, findings are reviewed from several state studies that dealt specifically with students in vocational-technical programs. The reader is also referred to the previous section reviewing state studies, most of which examined students in vocational-technical programs as part of a general study of post-high school plans.

In a random sample of 35 Illinois proprietary schools with a population of 1,432 students, two-thirds were female; half were single; 53% were white; mean age was 27; and half had a family income less than $12,000 (Juhlin, 1977). One-third of the respondents had parents who had not finished high school, and 90% had parents who had not completed 4 years of college. Seven in 10 had completed high school, and 6 in 10 were in the upper half of their class. Four in 10 had a full-time job after high school, and about a third went to school directly after graduation. About 60% had previously attended another postsecondary institution.

Advertising and advice of friends formed the information base about a school. About 60% were enrolled full time. Own income and savings were the most frequent sources of financing education followed by family support.

Men had higher expectations of education and income levels, as did older students, married students, and whites. About a third expected to obtain a bachelor's degree.

Some of the conclusions of the study were: (1) characteristics of students differed markedly among types of schools;

(2) proprietary schools were seen as avenues to employment with students less likely to enroll directly from high school; (3) students were less likely to come from middle-class families than was true of collegiate students; (4) lower family income was explainable by greater proportion of nonwhite students--within racial groups these students were not necessarily less affluent than community college students; and (5) proprietary and community college students were generally similar in high school background.

In a study conducted recently in Minnesota (Pucel and Murphy, 1975), it was found that the age of students entering the 33 Area Vocational-Technical Institutes between 1971 and 1973 increased. In 1971, 7% were 17 years old, 43% were 18, and 17% were 19; in 1973, 8% were 17, 39% were 18, and 16% were 19. The proportion of males remained at 62% to 63%.

There was an increase in the number of enrollees who came from professional-managerial families: 1971, 15%; 1973, 20%. Students with clerical-sales parents increased from 8% to 10%; and in craftsmen-operator categories, from 26% to 32%. There was a decrease of students from service worker-laborer families from 29% to 25%. Corresponding to the occupational shifts of students' families, as well as due to inflation, there was a greater percentage of students from households with incomes over $8,000, 32% to 43%.

Students entering technical education programs at 4 different public postsecondary schools in Oklahoma--residential

junior college, residential vocational-technical school, nonresidential metropolitan technical institute, and a technical institute on a state university campus--in the fall of 1967 had different personal, social, SES, and scholastic aptitude (Phillips, 1968).

Students in the metropolitan technical institute had the highest aspiration for a bachelor's degree or better (70%); in the on-campus institute, 63%; and followed by junior college students, 57%. The vocational-technical school students aspired to a bachelor's or better only 19%. The latter's academic aptitude was lowest and significantly different from the other three groups of students. Vocational-technical school students were also significantly set apart from other students on SES measures.

High school class standings of first-time enrollees of 1973-74 in the community colleges of Virginia were similar for those entering transfer or occupational-technical programs. Specifically, the class standings of occupational-technical entrants were 10% in the top tenth; 83% in the upper half; and 17% in the lower half (Trufant, Kelly, and Snyder, 1975).

Males comprised 57% of the students in the occupational-technical programs compared to 53% in all programs. Whites comprised 84% and blacks 14% of the occupational-technical students compared to 85% and 12% of all new enrollees. The age of new students in occupational-technical programs was

19.2 for males and 18.3 for females as compared to 21.8 for males and 21.6 for females for all first-time students. Goals of the occupational-technical students were occupational, 78%; transfer, 10%; and general personal, 12%.

Virginia's community colleges were attracting more students who had no precedent of higher education in their families than other colleges in the state. The educational attainment of parents of occupational-technical students compared with all students in community colleges was considerably lower.

In summary, the high school senior planning a vocational-technical program of study is in many respects similar in socioeconomic background and academic ability to both those seniors planning not to continue their education and those seniors planning to enroll in transfer programs in community colleges. However, the vocational-technical planner differs from those planning to enter 4-year colleges or universities, generally possessing lower SES measures and lower academic ability and achievement.

Characteristics of students differ markedly among types and levels of public colleges and between public and proprietary schools. Some racial/ethnic groups prefer the proprietary schools, for example American Indians and Blacks, while others, for example Mexican Americans, tend to enroll in public colleges offering vocational-technical programs. In general, a larger percentage of nonwhite enrollment occurs in

this sector of postsecondary education. A fairly large proportion--from one third to one half--of vocational-technical students aspire to a baccalaureate degree at some point in the future. This is particularly characteristic of males, especially those entering business-oriented curricular offerings.

It appears that vocational-technical programs provide a viable alternative to the traditionally-structured forms of postsecondary education, allowing students who want to acquire a marketable skill to be on their own within a few years. It is the choice of those who do not like or have not done well in the general academic courses, and it attracts many who want to eventually earn a four-year degree but who need to first learn a skill to finance further education.

Transition from High School to Employment

The transition from high school directly to employment and other non-educational activities such as homemaking and military service is a deliberate, planned process for many youth. The assumption that there is anywhere near a perfect correlation between native intelligence and/or academic ability and plans for further education is misguided. Just as there are many high school graduates of mediocre or low intelligence and/or academic ability enrolling in many types of postsecondary institutions, so are there many highly able youth who, by preference or by force of circumstance, bypass or reject all plans for further education. Many of these

ambitious, able young persons have taken a long, hard "cost-benefit" look at their immediate future and have deduced the following: If most 18-year olds are embarking on post-high school educational careers, what will be the relative value of such education? Will it provide the edge, the advantage it once did in seeking and obtaining better jobs, and more rapid advancement in those jobs? Furthermore, what about the lengthening terms of such schooling combined with the escalating costs in terms of foregone income? Five or six years minimum of collegiate education times $6,000 to $10,000 per year compounded by the income one could have earned during those years amounts to a prohibitive sum for many. Especially when some of the graduates of such programs can be observed driving cabs or working as short-order cooks. Furthermore, the long years spent in college prevent the acquisition of any practical employment experience or record. A familiar apocryphal story is that of the young man who first earns a two-year associate degree and, not finding a job suitable to his education, returns to college for a baccalaureate to enhance his acceptability. This is repeated through the master's, doctor's and post-doctoral programs whereon he is told by potential employers that he is much too old for any kind of entry-level job! The result of evaluating these factors leads many high school graduates to enter employment directly as a calculated strategy to enhance their life chances, not only in terms of personal satisfaction, but as a strategy of relative advantage over those who, with the

majority, continue their schooling.

However, the decisions described above apply probably to a minority, perhaps a small minority, of those not planning further education. For most, there is little choice because of external factors of finances or family obligations, dislike for schooling and its relevance for their life, or low academic ability or record of achievement.

It must also be recognized that, despite federal and state support for occupational training at the elementary and secondary levels, the vast majority of youth who do not seek education beyond high school, leave the educational system without specific preparation for any type of job. Not only have they no training, most have not even had direct contact with the world of work. This is so despite the fact that many of these students have had extensive general education, job skills training, or other sorts of vocational education. But job skill and work know-how are not the same. Even for those young people with demonstrated job skills, most do not know how to work, and that, of course, is the central educational problem in the school-to-work transition.

This is a new problem. Ours is the first generation to be confronted with this situation, and its manifestations, in such vast proportions. It is only recently that the school-to-work transition became identified as an educational problem. The problem is now prominent because we are seeing the effects of socioeducation reforms (especially child labor and

compulsory education laws), cultural urbanization, and economic-technological progress. These factors have prevented any real economic role for school age citizens. Functional status in our society is being deferred to at least 18 years of age, and that deferment, for all practical purposes, is reaching upward to 25 years. For those who have no vicarious or secondhand contact with the "world of work", the problem is amplified.

It is reported that while the technical "skills for most occupations are learned relatively easily and quickly" and that "the majority of workers . . . picked up their occupational skills informally on the job," (Grub and Lazerson, 1975) it is also reported that young people's ability to cope with the real demands of work constitutes one of the major impediments in their transition from school to work (Gabin, 1967). Furthermore, young people "do not necessarily see the all-important, informal structure (in workplaces) and have to be taught the 'rules of the game'" (Silberman, 1974).

A high school education (typically with a liberal arts emphasis) as a rule provides youngsters with few marketable skills, thus evoking growing interest in, and increased federal funding for the broadening of vocational, or "career" education within the high school curriculum. In discussing the increasing gap between school and work, a federal report cites the high rate of both unemployment and underemployment among youth in the United States, rates that are the highest

for all industrialized nations (The Manpower Report of the President, 1968). The report was interpreted as proposing a number of remedial approaches to this problem, "of which the first was improvement in the educational system and great expansion of cooperative education programs to better prepare young people" (Shapiro, 1973, pp. 56-57).

A noted social scientist commented as follows:

> The only ladders leading to a tangible goal are those hooked to the registrar's window at a college or university. . . . Climbers who do not have special talents, whose abilities do not require college, and who have no intention of going there see the secondary school ladder ending in midair. Many youngsters who need a job for a goal cannot see the rung above them is any closer to the goal than the rung on which they happen to be standing. Some kind of job experience as part of the curriculum might change this. On the average, unemployment applicants for jobs who are below twenty-one have completed more years of schooling than the employed people above that age. If something cannot be done, and promptly, about jobs for youngsters who are approaching or have already completed frustration in the school system, Americans may expect more headaches than all the patent medicines in the country can relieve. The schools cannot perform the miracle of fitting all people for the kind of jobs that the Nation likes to think are available (Pettit, 1970, pp. 244-45).

Comparatively little research literature exists based on studies of those students who do not elect to pursue further education. Furthermore, there seems little inclination to expand research efforts in this area. One research study followed-up high school graduates 8 years after graduation (Little, 1967). The researcher found that about 43% of tne boys had attended college, although more than a third of them had not completed baccalaureate degrees; 17% had enrolled in vocational-technical institutions; 41% had not continued

formal schooling beyond high school graduation.

About a fourth of the graduates attained occupations relatively high on a standard occupation prestige scale. Of these, nearly 4 out of 5 graduates had attended or graduated from college--a prerequisite for most scientific, technical, and professional careers. Another fourth of the graduates landed in occupations labeled low. Of these, more than 3 out of 5 were graduates whose formal education stopped with high school graduation. Half of all the graduates were at work in the middle group of occupations, which covers most of the wage-earners and income-producers of the country. The large pool of middle-level workers had widely differing amounts of schooling; some were college graduates. Each occupational level drew some workers from each level and type of schooling. High school graduates who had vocational-technical training escaped assignment to low prestige occupations more often than students who did not take such training. The occupational advantage of most of those who attended college was definite. The occupational handicap of most of those who did not continue schooling beyond high school was serious, particularly if occupational prestige was important to them.

The lack of relationship between the prestige score of the occupations attained and the scholastic records of the students while in high school was astounding. Students who had ranked in the top 10% of their classes and who had graduated from college attained occupations of distinctly high prestige. Below the top 10%, however, rank in class did not

significantly affect the prestige level of the occupations attained by those in each level of schooling. Students who completed specific vocational-technical training received higher placement than those who did not; but persons who did not complete baccalaureate degrees found themselves competing with vocational-technical graduates and others for the great majority of jobs in the middle.

These results seem to be saying to high school graduates: Regardless of scholastic performance in high school, completion of some form of specialized training is definitely helpful.

Many researchers identify the lack of manpower planning and the linkages between schools on the one hand and business, industry, and government on the other. The issue here is not so much that youth are isolated from the real world of work during their schooling years, but that there is often little connection between the jobs students train for and those that in fact exist. Two recommendations are: (1) that counselors get to the students at an earlier stage in their schooling career than is presently the case, and (2) because of the limited number of placement officers, it is recommended that counselors get to the students indirectly by training faculty members to perform some of the counseling functions. This training would require counselors to know more about the job market.

However, it is recognized that it is not possible to

ensure that students make realistic career plans and obtain the requisite preparation. In some cases very little preparation is required. Taylor (1976) has documented the limited extent of formal training that is required for most jobs, and notes that successful training programs must be tied closely to the eventual employing business or industry. Others have also commented on the necessity of bringing other constituencies together with educators to build bridges between schooling and working. Wirtz (1975) sees part of the answer in community councils, consisting of educators, employers, union representatives, students, parents, and other members of the local community. Such collaboration among school and work sectors of the society is also evidenced in foreign countries, notably the Latin American and British systems (Shapiro, 1973). In many of the above studies, the critical role of some centralized, governmental coordination is identified. Perhaps ultimately the main cause of the mismatch between training obtained by most students and the type of jobs available is the lack of status accorded to vocational (as opposed to liberal arts/academic) education. However, since American society is competitive and success-oriented in economic terms, the factors of increasing relative advantage for those who enter employment early, as discussed at the beginning of this section, may well begin to reverse the sense of values tied to attainment of further education for its own sake.

The Impact of Student Financial Aid on Post-high School Plans

Since the completion of literature review for the publication of the report for Phase I of this study (Fenske, 1976), a comprehensive review of the research literature was published (Fife, 1975) in which the author of the present report was substantially involved (see acknowledgements and pp. 30-41, Fife, 1975). The reader is referred to that publication for a full review of the subject. This section will briefly summarize the salient findings of that publication and present some additional information on state efforts to provide financial aid to students.

It is clear that most federal and state efforts in the field of student financial aid have centered first on access, then on choice of college (even more recently, efforts have been directed toward retention). This has been true for both the efforts of the federal government and the state governments.

The history of large-scale state financial aid is brief. Well over 90% of all funds awarded since the first dollar has been in the last 15 years. However, there is an interesting history nonetheless, since the Civil War era, which, with the establishment of land-grant colleges, inaugurated a significant public sector. Several of the midwestern states, concerned about the miniscule enrollments in the new agricultural and mechanical colleges, and fearful of seeing them die for lack of students, initiated extremely modest loans and

scholarships for the bright and talented farm boys in order to entice them to college. These were followed by similar enticements for teachers for the common schools to attend the county or state normal schools. Thus manpower (or womanpower) needs were the first determinants of state financial aid to students. Other purposes were, in order:

1. Benefits to veterans for financing their higher education have long been included as a form of state aid to military service personnel

2. Scholarship aid has developed both as an incentive and as a prize to assist those high in ability

3. Assistance to students high in ability who can also demonstrate financial need has directed the use of state funds to increasingly pragmatic and economic ends

4. Comprehensive, rather than categorical, aid programs have been made available to state residents to make it possible for them to attend either public or private institutions, and

5. Special programs have been developed to meet the requirements of certain students who can show extreme need without regard to academic potential.

Currently, the states have been invited, and provided with incentives, to enter into a partnership with the federal government in expanding and coordinating efforts in student financial aid.

A trend or shift is discernible here: From manpower needs to special prizes for the academically gifted, to

need-based awards, to a partnership with the federal government. Presently, about 75% of all state aid funds are awarded solely for financial need, without regard to academic potential or achievement. The stated purposes of state scholarship commissions are as follows:

1. To give students the opportunity of access to post-secondary education

2. To preserve diversity (a balanced public/private system) by giving students a reasonable choice among institutions, by equating the award to the higher costs of private institutions

3. To supplement other sources of funds (from the students, from his parents, and from federal and institutional sources)

4. To conserve public funds by making it possible for financially needy students to utilize otherwise unused spaces at private colleges, and

5. To permit a student's employment work load and/or loans to remain sufficiently modest so as not to affect his studies or future plans adversely (Boyd, 1975).

In terms of scope, the state financial aid programs are large, approaching 700 million dollars annually. Furthermore, the growth trends are very impressive; as recently as 1960-61 the total amount awarded through state financial aid agencies was less than 20 million dollars. In 1969-70, the total was just about 200 million. Furthermore, this trend has resulted

in 350% increase from 1969-70 to 1976-77 and is likely to continue for the next 5 years at least at the rate of 10-20% per year, and will top 1 billion dollars within 3 years. The 26 1/2% increase from 1975-76 to the current year is due to the impact of the adoption of the Federal State Scholarship Incentive Grant program by 47 states over the last 3 years. However, it is clear that these have been very substantial growth years, even without the SSIG program because the funding levels of this program are actually quite modest: in 1974-75, the funding for SSIG was 19 million dollars, the next year it was 20 million dollars, and in the current year it is 44 million dollars. This program, however, does seem to have the desired "multiplier" effect because it has caused 19 states in the last 2 years to establish state financial aid programs where none had existed before. Presently, only 2 states have no program, Alaska and Nevada, and these represent 1.3% of the United States population. (Arizona participated in this program for the first time during the present academic year.)

State scholarship commissions are a large and growing part of financial support of higher education. They have substantial impact on most of the important factors in higher education, including the relative balance between public and private colleges, access to colleges of all types, choice of college, broadening of the socioeconomic spectrum of students in higher education, and the so-called "market model" in higher education which provides accountability to society

through providing the student as consumer with the means to select whatever program seems most appropriate to him or her.

Several states have conducted specific surveys to determine the impact of their financial aid programs on post-high school plans. For example, in Arkansas all financial aid administrators of public and private colleges and of vocational-technical schools and proprietary schools were surveyed (Glover and Chapman, 1975). Information was collected for the 1973-74 and first part of the 1974-75 school years. Data was obtained from a survey of a sample of 77 private and parochial schools, stratified according to size and geographic location. Responses were received from 45 schools (58%) with total respondents numbering 3,269. Of the total, 1,370 were juniors, or a 4.83% sampling; 1,889 were seniors, or a 5.94% sampling of the 1975 seniors. Information was secured from letters and personal contact with student aid resource agencies and interviews with aid administrators and aid resource people and from existing reports.

The report concluded that current student aid (1975) needs were not being met; that loan resources were overfunded; that more funds were needed for grants and employment; that student aid per student was disproportionately distributed among various institutions; and that the state effort was far short of its obligation.

About 46% of the seniors of 1975 expected to continue their education on a full-time basis, a decrease from previous years. Indirect costs and loss of earnings appeared

to be a deterrent of continued education, not direct costs. About 51% had expected to apply for aid while 69% did not answer the question of how much aid was needed, and 37% did not know what kind of aid was needed. Moreover, 56% never heard about student aid, or their first knowledge was through the survey. The responses of the 1975 juniors were similar to the 1975 seniors.

A study conducted for the State of Iowa Higher Education Facilities Commission focused on the financial needs and resources available to undergraduates in Iowa colleges (College Entrance Examination Board, 1975). It estimated additional aid required to meet the needs of those enrolled and provided an estimate of the amount necessary to enable all qualified high school seniors to have access to some form of postsecondary education.

The aggregate financial need of full-time undergraduates was calculated to be 113 million dollars. Since there was estimated to be 92 million dollars available from all sources, there existed a gap of approximately 21 million dollars between the desired need goal and the available resources. However, because of the ways in which aid was distributed among institutions and students, nearly 34 million dollars would be required to meet all students needs.

The distribution of aid from the 3 main sources (federal, state, institutional) differed according to family financial circumstances and institutional type, for example, most state

aid went to students in the $9,000-$12,000 level at private institutions; federal aid went to those at private and public institutions with a family income below the $9,000 level. The need for additional aid was greatest at the 4-year private college, which had more than 60% of total need. Families with incomes between $9,000-$12,000 had the greatest unmet need--these comprise one sixth of total enrollment but have more than one third unmet needs.

According to the judgment of the survey staff, "About 16 percent of the 1974-75 group of high school seniors (1) could be admitted to some form of postsecondary education, (2) have an interest in some form of postsecondary education, and (3) are deterred by lack of funds" (p. 35).

As detailed in the following chapter, a keen interest has developed in Arizona on the potential impact of new and prospective programs of student financial aid on post-high school plans. This has resulted in a heavy emphasis in the present study on obtaining data for this purpose.

Chapter III

METHODOLOGY

General approaches to research design, sampling and instrumentation for the conduct of Phase II of the Study of Post-Graduate Plans of Arizona High School Seniors were pilot tested during Phase I of the study. The pilot phase tested the conceptual framework, developed and tested a data-gathering instrument, and provided experience in the procedures of administering the instrument. The full-scale comprehensive survey administered in the spring of 1977 was enhanced by the experiences and results of the previous year's pilot study.

Design

Several survey approaches were considered, including personal interview, telephone interview, mail survey, and on-site administration either by school personnel or by project personnel. Extensive review of the literature in survey research and considerable actual experience of the Project Director led to the selection of on-site administration of a specially designed questionnaire by school personnel. The successful experience of the pilot study led to a continuation of this approach in the second phase of the study.

Solicitation of participation by schools selected in the sample was accomplished by both an invitation letter and a follow-up telephone call. The letter of invitation (Appendix B) was intended to develop interest in the survey by reference to the importance of the post-high school plans of the graduating seniors. The follow-up telephone call noted in the letter was intended to answer specifically any questions that school administrators might have about the survey.

After participation was assured, the school was included on a master list which also served as a control point for mailing of materials, return of data, and follow-up telephone calls for an estimate of the number of graduating seniors.

Sampling

The sampling techniques of Phase I were primarily to test administration and instrumentation for Phase II, not to gather reportable data for estimating population parameters. Accordingly, a small sample was selected through a sampling design that would yield approximately the same precision as simple random sampling but at a fraction of the cost. In the pilot study, schools were randomly selected from strata defined by geographical location, senior class size, and racial/ethnic composition. Within each school a maximum of two civics classes were selected. These classes were used because in nearly all Arizona high schools seniors are required by

law to take these courses and are not differentiated by ability or other factors. The stratification and clustering principles yielded a sample of 1,183 seniors, a more than adequate size for purposes of the pilot study. When N = 1000 and simple random sampling is used, there is approximately a 95% chance that any estimated proportion of the whole population will be within $\pm$ 1.5% of the true proportion.

Respondents for Phase II of the study were selected through sampling techniques of stratification, systematic selection, and clustering. Arizona public high schools were used as primary sampling units and were stratified on basis of geographic location--Rural or Urban; on basis of size of incoming senior class--Small (no more than 150), Medium (from 150 to 400), and Large (over 400); and on basis of racial/ethnic composition--predominantly White (over 65%), predominantly Minority (over 65%), and Mixed (neither predominantly White nor Minority). The 3 matrices defined 18 possible strata, 15 of which contained clusters (high schools). This matrix is shown in the following table.

Table 1

Stratification Matrix of Population of Arizona High Schools

		Small	Medium	Large	Total
Rural	White	30	7	3	40
	Minority	13	3	0	16
	Mixed	12	9	0	21
Urban	White	2	15	27	44
	Minority	0	2	4	6
	Mixed	1	3	2	6
	Total	58	39	36	133

Within each strata schools were ranked by increasing size order. After a random start was determined, every third school within each strata was selected. If the selected school had participated in the pilot study, the next school was selected with the sequence of three maintained from the original selection. This option was used for seven schools. If schools shared a selected size rank, a coin flip decided inclusion in the sample draw. A total of 45 sampling units (schools) were drawn. Four of the originally-drawn schools did not participate in the survey. One school was inappropriately included in the population of schools, i.e., it was a specialized auxiliary program and did not have graduating seniors; one school had just completed renewal of accreditation and had undertaken numerous surveys regarding seniors' plans in conjunction with the accreditation process; one

school, whose administration was under legal indictment, did not respond to the follow-up telephone call; and one school administrator did not make a commitment during the required time period. All were replaced with schools from the same strata as the original selections.

These procedures correspond to generally accepted standards and techniques of survey sampling (see, for example, Cochran, W. G., Sampling Techniques. New York: Wiley, 1963; also refer to the technical description of these stratified sampling procedures on pp. 37-40 and Appendix J of the Final Report of the Pilot Study [Phase I] of Post-Graduate Plans of Arizona High School Seniors [Fenske, 1976]).

The sample matrix is shown in Table 2.

Table 2

Stratification Matrix of Sample of Arizona High Schools

		Small	Medium	Large	Total
Rural	White	10	2	1	13
	Minority	4	1	0	5
	Mixed	4	3	0	7
Urban	White	1	5	9	15
	Minority	0	1	1	2
	Mixed	1	1	1	3
	Total	20	13	12	45

Most medium and large schools that administered the instrument in required senior classes returned about half of

the anticipated answer sheets. A check with administrators revealed that about half of the seniors had taken the required courses the previous semester or year and thus were not present to respond to the questionnaire. There appeared to be no important biases related to when a senior took the required classes.

An estimate of the number of graduating seniors was obtained from the high schools in late April, early May. Two schools were not able to provide an estimate, therefore an estimate was derived by multiplying the average retention rate (of the ending junior class divided by the estimated number of graduating seniors) of the other 43 high schools to the ending junior class size of 1976. The two derived estimates may be high since a retention rate at the two schools for the previous year was about 20% lower.

The total estimate of seniors graduating from the 45 survey schools is 10,914. The number of seniors participating in the survey was 7,210, or 66.1%. The number of usable responses is 6,314, or 57.1% of the estimated graduating seniors in the sample schools. The unusable response rate was 12.4%. This unusually high rate for surveys of this type was primarily attributable to exceptionally stringent requirement of full and accurate responses to a somewhat complicated questionnaire by the Project staff. Also, there was considerable laxity of administrative monitoring of the questionnaires at the schools as well as failure by many of

the seniors to comprehend or follow the instructions on the questionnaire. Even with the high rate of rejection, the number of usable responses is more than sufficient to estimate population parameters. The large sample allowed the project staffthe luxury of stringent standards of questionnaire response acceptability.

Appendix C gives a listing of the participating schools with the size of the graduating seniors class, the number of respondents for the study, and the stratum of the high school.

Appendix D contains the letter sent to the administrators along with the questionnaire; Appendix E contains the instructions sent to the classroom teachers/counselors for actual administration of the questionnaire. These instructions were developed after consultation with several administrators, and with the Directors of Research of both the Phoenix Union High School District and the Tucson High School District.

Instrumentation

The specific item content of the instrument was determined by the conceptual framework described in the pilot study section of the first chapter. As a direct result of consideration of the vast amount of research literature, with special attention to reports of other state studies of post-high school plans and also a large number of similar questionnaires used in other states, a large item pool was eventually

developed.

In general, the approach was to consider the transition or flow from high school to post-high school activities as consisting of three distinguishable and mutually exclusive streams: (1) Those who did not plan to participate in further education after graduation, (2) those who planned to attend a trade, technical or business school to prepare for a career or occupation not requiring a four-year degree, and (3) those who planned to attend a college or university program leading to a four-year baccalaureate degree.

While these three categories are conceptually regarded as mutually exclusive, it is fully recognized that people do not generally, and in this particular instance, organize their future plans so neatly and wholly into categories. For example, there will obviously be a number of graduates who would straddle two of the categories, namely, those who intend to work full-time and attend either a career education program or a degree-granting program on a part-time basis. As can be noted in the questionnaire, (Appendix F) instructions attempted to deal with this problem by asking the seniors to respond regarding their planned full-time activity. Also, it is further recognized that there would be a considerable number of seniors who are uncertain about their plans for the coming year, even as late as mid-April or even early May of their senior year. Again, instructions attempted to deal with this problem.

Thus, the three plan "streams" defined the conceptual parameters and included all graduates; in a sense this approach organizes the research activity according to the overall objectives of Phase I and Phase II combined. It can be noted that all of the eight research objectives stated in the original proposal and restated in Chapter I are covered through this organization of activities. The specific topics encompassed in the concept of transition from high school to college/career are all included in the questionnaire.

The feasibility of the conceptual framework and the usefulness of the data-gathering instrument was demonstrated in the pilot study. Following an analysis of the pilot study responses, revision of some parts of the questionnaire for use in Phase II was undertaken. Some questions were combined into one item; ambiguous questions were rephrased; some items common to all three groups were moved to the general section; and new items, particularly relating to socioeconomic variables, knowledge of financial aids, financing plans, and part-time schooling, were added.

Items common to all graduating seniors in the survey are:

1. Age. Some studies have shown that differences in age have characterized seniors with different plans, for example, there is a tendency for seniors older than the usual age to select vocational-technical types of post-high school education.

2. Post-high school plans of siblings. This topic has bearing both on the likelihood of a senior to attend college because of the example of older brothers or sisters, and it also has considerable bearing on the financial resources available to the responding senior.

3. The sex of the respondent has long been recognized as related to type of post-high school plan. There persists in many families the tradition that sons will be sent on to further education in preference to daughters. Furthermore, there are considerable differences in scholastic aptitude and achievement between males and females, the males scoring higher on aptitude tests, females showing greater academic achievement in high school.

4. Of all items, parental income is most critical in the tendency to send sons or daughters on to college. This factor has shown over the years and across all geographic regions the most stable and consistent relationship with type of post-high school plan.

5. Seniors were asked to report their overall grade average in high school. Experience by the American College Testing Program over 15 years with approximately one million high school students per year indicated that there is considerable accuracy and fidelity in self-reported high school grades. Studies have shown that not only do seniors with higher grades have a tendency to attend a postsecondary institution, but also that a sizable percentage of those planning not to continue also have high grades.

6. Seniors were asked about the support of their parents for their plans as well as a measure of peer support of similar activities.

7. The racial/ethnic background is shown by research literature and long experience to be strongly related to type of post-high school plans. The particular designations correspond to those in most current and widespread use.

8. The educational level of parents is known to be related to post-high school plans, although differently by sex and racial/ethnic categories.

9. A set of questions determined whether or not the student worked while in high school, the extent of that work, and the type of work performed.

10. Two questions asked about the parental occupations of the student. This information is related similarly to post-high school plans as are parental income and education, and provides an information source if a student chose not to provide data on parental income.

11. The Project staff was most interested in determining the degree of knowledge about student financial aid exhibited by respondents in each of the three types of post-high school plans. A separate indicator was used for the Basic Educational

Opportunity Grant program, since it is most widely advertised and is available on an equal basis to all regardless of academic aptitude or achievement. It was also of considerable interest to determine the rate of application among the three types of post-high school plans. An additional series of questions ascertained a student's knowledge of the availability of other financial aid programs and the sources of information concerning that knowledge.

After the basic demographic and socioeconomic information section was completed, the respondent was directed to answer only one of the three remaining sections, the one corresponding to his or her plan for post-graduate activities.

The following question or items referred to seniors not planning further education on a full-time basis, designated as Section A on the questionnaire.

1. The probable activity for the following year was defined in four gross categories, with the expectation that most seniors planned to work.

2. A second item determined the type of work planned by the responding senior. It is well recognized that 18-year olds with only a high school education are severely limited in the type of work available to them. Obviously, they are excluded from highly skilled trades or crafts and from professional or managerial types of occupations which require a certificate or degree earned in an educational program. (Note: The same categories and scale were used as in the item determining type of work while in high school.)

3. The attitudes of the seniors toward the importance of further schooling was also determined, along with a follow-up item concerning the financial commitment and resources toward further schooling. Specifically, the item asked "if you had it, would you spend the money necessary for further schooling?" For those who answered "yes" a determination was made of how much money would be needed.

4. The encouragement of teachers and counselors in the school setting towards further schooling was examined.

5. Finally, it was of interest to determine the extent, if any, of part-time plans to attend a school or college.

The following topics were addressed to those seniors who planned to attend a career education type of program, designated Section B on the questionnaire.

1. The first topic was the type of the specific school or college. The Project staff was quite interested in determining the utilization by Arizona high school seniors of both public institutions such as community colleges and proprietary (for-profit) schools. Furthermore, there was interest in determining the type of program as indicated by the specific college (business, technical, cosmetology, etc.).

2. Much of the research literature examined indicated that there was a particularly high propensity for high school seniors to attend a trade or technical type of school if either the mother or father or both had attended a similar type of school. This topic was examined in a set of separate questions.

3. Of particular interest was the expectation of enrolling in a program leading to the same or different type of job as the senior had held in high school.

4. A direct question was asked concerning why these seniors were not planning to work toward a four-year degree. Previous research and experience indicated that many, if not most, of these types of students are impatient with courses and programs of a general or non-career nature. It would be of considerable interest to Arizona secondary and postsecondary education to determine the strength of these attitudes.

5. An indication of definite plans is contained in an item asking if the student had already applied to a school.

6. Research has suggested that placement services of proprietary schools are an important factor for choice of such; therefore, a question was included to determine the high school seniors' perception of the importance of this feature of proprietary schools.

At this point the students responding to Section B were asked to skip to questions in the final section dealing with plans for financing their post-graduate education.

The following research topics were investigated among the seniors planning to attend a college or university program

leading to a four-year baccalaureate degree, designated Section C on the questionnaire.

1. First, the specific college or university identified was of considerable interest. Included were the three state senior universities, local community colleges, private colleges, and colleges or universities in other states.

2. The commuter or resident status of first-year collegiate students is an indicator of many important factors, among them financial capabilities, degree of both financial and emotional emancipation from the family, and whether or not the student is using the commuter status as a testing situation for his or her success in the collegiate setting. Also, it is of interest to note whether or not grants or scholarships were influential in plans to attend college while living away from home, and whether or not the family was willing to undertake financial hardships for this arrangement. Also, a determination was made of the attraction that the type of program offered by the institution had for these seniors.

3. The college-going seniors were asked if they would attend college in a different part of the country if it could be afforded. National studies of student college migration indicate that there is a decrease in out-of-state migration among college students. It will be of interest to note the extent to which Arizona students participate in this trend.

4. State studies have shown that most seniors consider preparation for a career as the most important reason for attending college. A question was included to ascertain the reasons of Arizona seniors at this particular time period.

5. Finally, both those seniors who planned on a career education type of program and those who planned to enter a baccalaureate program were asked about their plans for part-time work and approximately how much they planned to pay for schooling from job earnings, parents, grants or scholarships, loans, or savings.

In summary, it can be noted from examination of the questionnaire (Appendix F) that a large number of research topics are covered among the three groups with a relatively small number of common items. Phase II used many more items common to all three groups than Phase I. Particular note might be

given to the instructions on the questionnaire, since they were designed to shorten as much as possible the time of administration by directing each student to answer only those questions appropriate to his/her type of post-high school plan.

Data Collection, Processing and Analyses

Questionnaires and procedural instructions were mailed or hand-delivered to school administrators promptly after the follow-up telephone call. Answer sheets were returned in stamped self-addressed envelopes or picked up by Project staff. The Project staff wishes to express its gratitude to all school administrators and personnel who were instrumental in the successful completion of the survey. A special word of thanks goes to Dr. Lloyd Colvin (Research Director, Phoenix Union High School District) and Dr. Barbara Prentice (Research Director, Tucson Public Schools) for their assistance not only in the distribution and collection of survey materials, but also for their advice and cooperation throughout the entire study.

The decision to utilize an optical-scanning process for transfer of student responses to computer-readable responses was based on anticipated size of the survey sample, cost effectiveness, reliability of the process, and rapidity of turn-around time. Students marked their responses on answer sheets furnished by the American College Testing Program (Appendix G), and all usable responses were forwarded to

Iowa City, Iowa where the optical-scanning scoring process was done by Westinghouse Learning Corporation under direction from the Project's consultants at the American College Testing Program. Consultants from ACT advised the Project staff both on research and questionnaire design and analyses for the overall study. Statisticians from ACT also developed the sophisticated sampling techniques utilized in the pilot study and modified by the Project staff in the final phase of the study.

The survey data were analyzed on a Univac 1110 digital computer at Arizona State University using the crosstabs procedure of the Statistical Package for Social Sciences, Version 6. The crosstabs routine generated Chi squares and measures of association of crosstabulated data as well as full tabular display of frequencies and percentages.

Chapter IV

THE FINDINGS

As indicated in the previous chapter, the total number of usable questionnaires is 6,319. This number represents the seniors who answered all, or nearly all, of the appropriate items on the specially designed questionnaire. As might be expected, no single item was answered by every one of the responding seniors. For example, 85 (1.3%) of the responding seniors declined to indicate their sex, normally an innocuous inquiry (at least until the present heightened sensitivity about sex discrimination and women's rights). For questions which were expected to be somewhat sensitive, e.g., racial/ethnic background and family income, larger (but not significant) incidence of nonresponse occurred, 4.3% and 8.0%, respectively, for these two items.

The basic variable in this study is the post-high school plan indicated by each of the respondents. The distribution of the 6,319 respondents is as follows:

2525 (40.0%) of the respondents selected section A of the questionnaire, indicating that they did not plan to attend any school or college full-time next year. Since a large majority of these seniors reported that they planned to be employed, they are for brevity designated

as the "Work" group in the balance of this report. 1295 (20.5%) of the respondents indicated that they planned to "attend full-time, a trade, technical or business school next year in order to prepare for a career or occupation which does not require a four-year degree from a college or university." This group is designated as "Vo-tech" henceforth in this report. 2499 (39.5%) of the respondents reported that they planned to "attend full-time a college or university program leading to a four-year baccalaureate degree." It should be noted that this grouping included those who planned to attend a regular college transfer program in a public two-year community college as well as those attending a four-year college or university. These respondents are designated the "College" group in the remainder of this report.

The findings presented in this chapter follow an organization similar to the questionnaire (see Appendix F) in which general background questions are asked of all respondents; then questions specific to the type of post-high school plan are asked only of the seniors who categorize themselves by that plan. The data are presented in full cross-tabulation form rather than in summary statistics since this allows direct inspection of all aspects of the joint bivariate distributions, and furthermore presents the findings in a manner not requiring esoteric knowledge of

specific statistical techniques. It is felt that this is most appropriate for the basic full report of this study since the primary group for which it is intended is a state commission comprising many public members. It is anticipated that other analyses will subsequently be performed on these data, most of which will utilize more sophisticated statistical techniques.

General Background Information

For consistency and ease of interpretation, all of the tables displaying joint bivariate distributions in this report utilize the post-high school plan as the independent, or control variable with frequency and percentage distributions shown for all other variables as a distribution within each of the plan categories. The first such table is illustrative.

Table 3

Sex by Post-High School Plan

Sex	Plan							
	Work		Vo-tech		College		Total	
	No.	%	No.	%	No.	%	No.	%
Female	1196	48.1	659	51.8	1266	51.1	3121	50.1
Male	1289	51.9	612	48.2	1210	48.9	3111	49.9
Total	2485	100.0	1271	100.0	2476	100.0	6232	100.0

Table 3 shows that the percentages of males and females reporting each of the three plans is nearly equal, with slightly more females planning both vo-tech and college education than males. The respondents in this study are divided almost exactly equally between males and females. At this point, it is worth noting that the opposite distribution in Table 3 can also be of interest. That is, the percentage distribution can be computed by rows rather than columns in this and following tables to yield interesting results. In Table 3 this computation would show that for all females, the percentages indicating plans for work, vo-tech and college are 38.3, 21.1, and 40.6 respectively. For the male respondents these percentages are 41.4, 19.7, and 38.6, respectively. By either mode of presentation, these distributions reveal that 1977 graduating seniors in Arizona as represented by these respondents have proportionately and numerically more females than males planning for vo-tech and college programs. This finding may be of some surprise to those unfamiliar with recent trends in postsecondary enrollments, but it is evident that Arizona is sharing in one of the newest and most significant changes in education, that of the full sharing by young women of higher education opportunity.

Another basic background variable for this study is the distribution of age for each category of post-high school plan (Table 4).

Table 4

Age by Post-High School Plan

Age	Plan							
	Work		Vo-tech		College		Total	
	No.	%	No.	%	No.	%	No.	%
16	51	2.1	33	2.6	60	2.4	144	2.3
17	1225	49.5	652	51.7	1435	58.3	3312	53.5
18	1057	42.8	506	40.1	920	37.4	2483	40.1
19	113	4.6	61	4.8	43	1.7	217	3.5
20+	25	1.0	10	.8	5	.2	40	.6
Total	2471	100.0	1262	100.0	2463	100.0	6196	100.0

As shown in Table 4, these seniors conform well to the expectation that nearly all of them would be either 17 or 18 as of the end of March in their year of high school graduation. A slight tendency is discernible for more of those reporting work and vo-tech plans to be 19 or older compared with the college group. Only 1.9% of the college planners were older than 18; in contrast, 5.6% of both the work and vo-tech groups reported their age as at least 19.

Data indicating the racial/ethnic background of the respondents are displayed in Table 5.

Table 5

Racial/Ethnic Background by Post-High School Plan

Racial/ Ethnic Background	Plan						Total	
	Work		Vo-tech		College			
	No.	%	No.	%	No.	%	No.	%
American Indian	101	4.2	94	7.6	77	3.2	272	4.5
Black American	51	2.1	43	3.5	42	1.7	136	2.3
Mexican American	351	14.6	228	18.5	208	8.7	787	13.0
Oriental American	24	1.0	13	1.1	39	1.6	76	1.3
White	1777	74.3	819	66.3	1949	81.2	4545	75.3
Other	92	3.8	41	3.3	86	3.6	219	3.6
Total	2396	100.0	1238	100.0	2401	100.0	6035	100.0

The data in Table 5 should be interpreted carefully, with full cognizance of the distribution of racial/ethnic background of the entire group of respondents as shown in the "Total" column. In relation to the proportion Whites comprise of the entire sample (75.3%), they demonstrate a strong tendency to plan for college (81.2%) and little affinity for

vo-tech plans (66.3%). The number of Oriental Americans in this sample is quite small; however, the general pattern is similar to those of Whites. In contrast, all other minority groups (American Indians, Black Americans and Mexican Americans) indicated college plans to a lesser extent, with a strong tendency to select a vo-tech educational plan. For example, Mexican Americans comprise 13.0% of the sample, yet only 8.7% are represented in the college group; conversely, Mexican Americans comprise 18.5% of the vo-tech group. It is of interest to note that the distribution of racial/ethnic background in the work group closely parallels the distribution in the overall sample: The work group is the most racially/ethnically representative of the three groups; the college plan group is predominated by Whites, while most minority groups disproportionately select vo-tech postsecondary education.

Nearly all high school seniors are dependent on their parents for most or all of the financial resources necessary to pursue post-high school education. (A later section will discuss data concerning various sources the seniors plan to use to finance their further schooling.) Obviously, information about family financial resources is important to this investigation of post-high school plans. The seniors were asked to indicate their categorical estimate of their parents' income in the current year, specified as "total income before taxes." It is apparent that this information would

be a rough approximation of funds available to the seniors for their post-high school plans. Among the significant intervening variables are the relationship between total income and net available income which differs markedly according to type of income and occupation (for example, between salaried versus business or farm income), and willingness of the parents to provide, and the seniors willingness to accept, continued financial dependency for educational or any other purpose. Furthermore, legitimate questions may be raised about the accuracy of seniors' estimates of their family income. Nonetheless, some information about this variable is essential for the present investigation, and the data gathered are viewed as most useful for purposes of comparison among plan groups, rather than precise parameter estimates of family taxable income. Table 6 depicts the frequency and percentage distributions of the data gathered.

According to the data shown in Table 6, the college group is clearly the most advantaged in terms of family income: Nearly 60 percent (58.9) of them reported their estimated family income as either $15,000 to $20,000 or over $20,000 compared with a total of 38.8% of the work group and only 35.9% of the vo-tech group in these categories. Of the three groups, the vo-tech group apparently has the lowest distribution of family income. For example, 28.5% of them reported their family income as being in one of the three

lowest categories ($9,000 or less) compared with an even 25% for the work group and only 15.7% in the college group. Level of income is, of course, interrelated with such factors as type of occupation, level of educational attainment and others. Data presented in subsequent tables will help to develop the group profiles discussed in the final summary chapter.

Table 6

Estimated Family Income by Post-High School Plan

Family Income	Plan						Total	
	Work		Vo-tech		College			
	No.	%	No.	%	No.	%	No.	%
Less than $3,000	103	4.5	79	6.7	58	2.5	240	4.2
$3,000 to $6,000	194	8.5	119	10.0	117	5.0	430	7.5
$6,000 to $9,000	274	12.0	137	11.7	191	8.2	602	10.4
$9,000 to $12,000	381	16.7	206	17.5	277	11.9	864	15.0
$12,000 to $15,000	441	19.5	212	18.1	313	13.5	966	16.7
$15,000 to $20,000	385	16.9	206	17.5	496	21.4	1087	18.8
Over $20,000	498	21.9	215	18.4	869	37.5	1582	27.4
Total	2276	100.0	1174	100.0	2321	100.0	5771	100.0

If any factor is generally acknowledged to be pertinent to the validity of plans for post-high school education it probably is academic achievement in high school. It is thought to be even more important than academic ability or potential as measured by tests, since it expresses not only ability but a "track record" of willingness to use that ability. The respondents in this survey were asked to indicate their overall grade average in high school. A wide variety of validation studies have shown such self-reported grades to be quite accurate, according to the major college admission test organizations and various governmental and other survey research efforts. Table 7 presents the data resulting from the respondents in this survey.

Table 7

Grade Average by Post-High School Plan

Grade Average	Plan							
	Work		Vo-tech		College		Total	
	No.	%	No.	%	No.	%	No.	%
A	214	8.7	108	8.6	781	31.7	1103	17.8
B	1016	41.1	584	46.3	1334	54.1	2934	47.3
C	1118	45.2	530	42.1	335	13.6	1983	32.0
D	110	4.4	35	2.8	17	.7	162	2.6
D-	14	.6	2	.2	1	.0	17	.3
Total	2472	100.0	1259	100.0	2468	100.0	6199	100.0

Of all the variables in this survey, high school grade average as shown in Table 7 most sharply differentiates the college versus the work and vo-tech groups. Note that nearly one-third (31.6%) of the college group achieved approximately an "A" average in high school, and an additional 54.1% achieved a "B". This means that less than 15% of the college-bound seniors achieved at the "C" or lower level. In contrast to the third of the college-bound seniors who achieved an "A", only 8.7% of the work group and an almost identical percentage (8.6) of the vo-tech group reported an "A" average. The groups are also sharply differentiated at the "C" level, with only 13.6% of the college group reporting this level compared with 45.2% and 42.1% for the work and vo-tech groups, respectively. Virtually none of these seniors who achieved less than a "C" planned to attend college. Academic achievement not only pertains to the likelihood of potential success in post-high school education, particularly in the more academic (college) programs, it also bears strongly on the self-perceptions of seniors as they plan their future after graduation. These data support the contention that young persons can and do sort themselves into appropriate plans. However, note that 214 (8.7%) of the work group, those <u>not</u> planning further education (at least in the following year) achieved at the highest level of academic grades. Projected to the estimated 1977 graduating class in Arizona, this represents well over

1,000 Arizona seniors with an "A" average who plan no further education of any kind. These seniors are a most intriguing subgroup in terms of their motivation, financial circumstances and job or marriage plans as well as background characteristics like sex, race or ethnicity, influence of parents and peers, and other factors. Findings such as this are precisely the type which, in an initial benchmark survey like the present one, will hopefully generate interest in and actual studies of a more intense and focussed nature.

As discussed in the review of literature, educational attainment of parents is a most influential background factor on post-high school plans. The seniors were asked to indicate "Which statement best describes how much education your father (or male guardian) has." An analogous question followed concerning their mother's educational attainment. Because of the similarity of the reported data, the results for both questions will be discussed together.

Table 8

Father's Educational Attainment by
Post-High School Plan

Father's Education	Plan						Total	
	Work		Vo-tech		College			
	No.	%	No.	%	No.	%	No.	%
Grade School	576	23.8	311	25.0	276	11.3	1163	19.1
High School	753	31.1	353	28.3	493	20.2	1599	26.2
Trade/Tech School	283	11.7	169	13.6	214	8.8	666	10.9
Some College	393	16.3	199	16.0	453	18.6	1045	17.2
4-Year Degree	246	10.2	118	9.5	552	22.7	916	15.0
Graduate Degree	166	6.9	94	7.6	447	18.4	707	11.6
Total	2417	100.0	1244	100.0	2435	100.0	6096	100.0

Table 9

Mother's Educational Attainment by Post-High School Plan

Mother's Education	Plan							
	Work		Vo-tech		College		Total	
	No.	%	No.	%	No.	%	No.	%
Grade School	551	22.6	313	25.0	255	10.5	1119	18.3
High School	1106	45.4	508	40.7	838	34.4	2452	40.0
Trade/Tech School	154	6.3	119	9.5	178	7.3	451	7.4
Some College	392	16.1	192	15.3	571	23.5	1155	18.9
4-Year Degree	156	6.4	82	6.5	375	15.4	613	10.0
Graduate Degree	79	3.2	38	3.0	216	8.9	333	5.4
Total	2438	100.0	1252	100.0	2433	100.0	6123	100.0

Tables 8 and 9 show highly predictable differences between the educational attainment of the seniors' fathers and mothers. In the generation represented by the parents of these graduating seniors it is commonplace to expect that more men than women will have had post-high school education. These data bear out this expectation: Over one-fourth of the fathers (26.6%) have a 4-year collegiate or baccalaureate degree compared with 15.4% of the mothers. This tendency is reflected also in lower levels of educational attainment with nearly 60 percent (58.3) of the mothers having achieved either grade school or high school completion compared with 45.3% of the fathers in these categories. As might also be expected from the strong relationship between education of parents and post-high school plans, the college group reported substantially higher educational attainment levels for their parents compared with the other two groups. About 60 percent (59.7) of the college group fathers had either "some college" or a baccalaureate or graduate degree, as did nearly half (47.8%) of their mothers. For the vo-tech group these percentages were 33.1 and 24.8, respectively; these percentages were almost identical for the work group (33.4 and 25.7, respectively). On the other end of the educational attainment scale for parents the college group is again sharply differentiated. Examination of Tables 8 and 9 reveals that about one in four of the parents of both the work and vo-tech groups were reported as having attained a

grade school or high school level of education; only about one in ten of the college group parents were reported at this level. A final interesting aspect of these data indicates a specific influence of parental experience with "trade, vocational, or technical programs" since the percentage of parents with this type of educational attainment is highest for the vo-tech seniors in both tables.

Closely related to the factors of parental income and educational attainment is the occupation of both the father and mother. Generally, the type of occupation of father is more influential on family resources for postsecondary education since he is the primary economic provider in the vast majority of families. However, it is also true that in many families, the additional income provided by the mother enables many high school graduates to pursue further education who could not otherwise. Tables 10 and 11 summarize data provided by the seniors in response to questions about their father's and mother's occupation which included extensive examples of the various occupational categories.

Table 10

Father's Occupation by Post-High School Plan

Father's Occupation	Plan						Total	
	Work		Vo-tech		College			
	No.	%	No.	%	No.	%	No.	%
Managerial	469	21.0	205	18.2	645	28.4	1319	23.4
Profes-sional	175	7.8	103	9.1	473	20.7	751	13.3
Sales	176	7.9	87	7.7	220	9.6	483	8.6
Technical	353	15.8	156	13.8	281	12.3	790	14.0
Skilled	657	29.5	353	31.4	434	19.0	1444	25.6
Farmer	55	2.5	44	3.9	56	2.5	155	2.7
Labor	345	15.5	179	15.9	172	7.5	696	12.4
Total	2230	100.0	1127	100.0	2281	100.0	5638	100.0

Table 11

Mother's Occupation by Post-High School Plan

Mother's Occupation	Plan						Total	
	Work		Vo-tech		College			
	No.	%	No.	%	No.	%	No.	%
Health Field	203	8.8	112	9.5	203	8.5	518	8.8
Housewife	1152	49.7	603	51.1	1156	48.6	2911	49.6
Profes-sional	114	4.9	55	4.7	261	11.0	430	7.3
Sales	214	9.2	111	9.4	221	9.3	546	9.3
Secretarial	442	19.1	205	17.4	439	18.5	1086	18.5
Service	193	8.3	93	7.9	98	4.1	384	6.5
Total	2318	100.0	1179	100.0	2378	100.0	5875	100.0

The order of father's occupation given in Table 10 follows the generally accepted hierarchical order related to prestige and income; however, mother's occupation (Table 11) is not so ordered. The key occupations signaling above average income and, hence, larger potential financial resources for post-high school activities requiring parental support are managerial and professional for fathers and professional for mothers. These are defined in the questionnaire as follows: Managerial includes executive occupations (banker, store owner or manager, etc) and professional is designated by the examples of doctor, lawyer or professor. In these occupations, the college groups reported much higher percentages than either vo-tech or work group. About half (49.1%) of the college groups indicated their father as being in these occupational categories compared with 28.8% of the work group and 27.3% of the vo-tech group. An even 11% of the college group reported that their mother's occupation was professional compared with less than 5% of the other two groups. The contrasting occupations, those generally regarded as on the other end of the hierarchical prestige/income scale show the opposite configuration. For example, a little over 15% of both the vo-tech and work groups indicate their father's occupation as "labor" compared with only 7.5% of the college group. The same percentage ratio occurs for the "service" occupation of the mothers with about 8% of the vo-tech and work group in this category compared with about 4% of the

college group. It is also of some interest to note that about half of the mothers in all three groups were categorized as housewives. Only slight differences among the groups are shown in the other occupational categories, e.g., farmer, technical and sales for fathers and secretarial, sales and health fields for mothers. Many studies show that these occupational categories are anomolous, with wide diversity or "spread" of income rather than clustering on a prestige/income scale. This type of distribution will not differentiate post-high school plan groups.

Tables 12 and 13 contain data relating to the employment of the respondents during their senior year and the number of hours worked per week of those who had jobs.

Table 12

Employment During Current School Year
by Post-High School Plan

Employment	Plan							
	Work		Vo-tech		College		Total	
	No.	%	No.	%	No.	%	No.	%
Employed	1578	64.2	756	60.0	1335	54.5	3669	59.5
Not Employed	881	35.8	503	40.0	1115	45.5	2499	40.5
Total	2459	100.0	1259	100.0	2450	100.0	6168	100.0

Responses by the seniors relating to employment and number of hours worked per week (Tables 12 and 13) show definite trends but not the sharp differentiation among the three plan groups evident in many of the previous tables.

Table 13

Hours Worked per Week in Current School Year Employment by Post-High School Plan[3]

Hours per Week	Plan							
	Work		Vo-tech		College		Total	
	No.	%	No.	%	No.	%	No.	%
1 - 10	230	15.3	140	19.1	270	20.6	640	18.1
11 - 20	480	31.7	237	32.2	465	35.6	1182	33.3
21 - 30	452	30.0	212	28.9	396	30.3	1060	29.8
over 30	347	23.0	146	19.8	176	13.5	669	18.8
Total	1509	100.0	735	100.0	1307	100.0	3551	100.0

There is a tendency for fewer of the college group to have jobs and (for those who are employed) to work fewer hours per week. Nearly 60 percent of all the seniors are employed, but the percentage is lower (54.5%) for the college group and higher (64.2%) for the work group than this overall average. Table 13 indicates substantial similarity among the three groups in number of hours worked but a discernible difference for those who are strongly commited to working long

hours (over 30), with only 13.5% of the college group in this category compared with 19.8% of the vo-tech group and an even 23% of the work group. Evidently, school-year employment fulfills many needs not necessarily related to post-high school plans, such as purchase and maintenance of a car, social activities and purchases of personal items.

The data on type of job (Table 14) reveals a similar pattern to the previous two tables on school-year employment of the seniors.

Table 14

Type of Job During Present School Year by Post-High School Plan[3]

Type of Job	Plan							
	Work		Vo-tech		College		Total	
	No.	%	No.	%	No.	%	No.	%
Service	461	31.3	235	33.3	438	34.5	1134	32.9
Secretarial	245	16.6	124	17.6	196	15.5	565	16.4
Restaurant	390	26.5	168	23.8	340	26.9	898	26.1
Sales	144	9.8	61	8.7	152	12.0	357	10.4
Farm	61	4.2	39	5.5	41	3.3	141	4.1
Laborer	109	7.4	44	6.3	63	5.0	216	6.3
Apprentice	61	4.2	34	4.8	36	2.8	131	3.8
Total	1471	100.0	705	100.0	1266	100.0	3442	100.0

Table 14 indicates a slight tendency for work and vo-tech seniors to be more often employed in farm, laborer and apprentice types of jobs than the college group of seniors, and a slightly higher percentage of the college group to be in sales work than the work or vo-tech groups. These data show almost no differences among the three groups in their incidence of employment in service, secretarial and restaurant work.

The number of older brothers and/or sisters who have already graduated from high school and are attending a college or other school is clearly an important variable in many if not most individuals post-high school plans (see Table 15). However, in aggregate it is subject to some ambiguity in interpretation. For some seniors, attendance at a post-high school or college by older brothers or sisters may encourage similar plans because of example; however, for others their attendance may simply preclude a similar plan because the older brothers and/or sisters attendance have exhausted family financial resources. Furthermore, the distribution of this variable is conditioned by family size, a factor largely unrelated by itself to an individual's post-high school plans.

Table 15 indicates a barely discernible tendency for seniors in the college group to have one or more older brothers and/or sisters attending a school or college than

those in the vo-tech or work groups.

Table 15

Number of Older Siblings Attending College by Post-High School Plan

Number of Siblings	Plan							
	Work		Vo-tech		College		Total	
	No.	%	No.	%	No.	%	No.	%
None	1543	62.3	744	58.6	1343	54.3	3630	58.4
One	540	21.8	343	27.1	694	28.1	1577	25.4
Two	228	9.2	114	9.0	292	11.8	634	10.2
Three	88	3.6	37	2.9	83	3.4	208	3.3
Four +	78	3.1	30	2.4	59	2.4	167	2.7
Total	2477	100.0	1268	100.0	2471	100.0	6216	100.0

There are many strong reasons why parental attitude toward post-high school plans would be influential on the decisions about activities after graduation. Nearly all of these seniors live at home with individually varying degrees of support from and interaction with their parents. For those post-high school activities requiring substantial financial support from parents, it is obvious that their attitude will condition the extent of that support. Even those activities not involving out-of-pocket parental expenditure will often call for continued involvement and support

such as the graduate continuing to live at home with "room and board" provided on the same basis as during high school. The questionnaire contained an item with a rank-ordered set of responses to the question "How do your parents feel about your plans for next year?" The resulting data are displayed in Table 16.

Table 16

Parents' Attitude Toward Plans by Post-High School Plan

Parents' Attitude	Plan							
	Work		Vo-tech		College		Total	
	No.	%	No.	%	No.	%	No.	%
Enthusiastic	388	15.9	343	27.3	947	38.4	1678	27.2
Approve of choice	1112	45.6	663	52.6	1269	51.6	3044	48.4
Indifferent	609	24.9	170	13.5	165	6.7	944	15.3
Not in favor	278	11.4	75	6.0	77	3.1	430	7.0
Strongly disapprove	54	2.2	7	.6	6	.2	67	1.1
Total	2441	100.0	1258	100.0	2464	100.0	6163	100.0

It may be surprising to many who observe manifestations of the generation gap to note that, in Table 16, over three-fourths of the seniors' parents either "approve" (49.4%)

or are "enthusiastic" (27.2%) about their choice of post-high school plan. However, there are very sharp differences in the distribution of parents' attitudes according to type of plan. While an even 90% of the college group parents approve or are enthusiastic, and the parents of the vo-tech group are nearly as favorable (52.6% "approve", 27.3% "enthusiastic"), the work group seniors rate their parents' attitude as much less favorable. Compared with the 90% and 80% figures indicating enthusiastic or approving parents for the college and vo-tech groups, respectively, only 61.5% of the work group parents are rated in these categories. Furthermore, there is a strong strain of disapproval in the distribution of work group parental attitudes. Nearly forty percent (38.4%) are either "indifferent", "not in favor", or "strongly disapprove" of work or other plans for next year that do not include full-time postsecondary educational programs. The one-fourth (24.7%) of the parents who are rated as indifferent by the work group respondents signal an almost tragic lack of communication at this, one of the most critical junctures of a young person's life. The overall pattern underscores the strong tendency, revealed in most public opinion polls for many years, for parents to view post-high school education as a major determinant of their son's or daughter's success in life.

For many high school students, the influence of their friends and peers is as strong as their parents in regard to post-high school plans. The seniors were asked whether or not most of their friends have similar plans. Their responses are contained in Table 17.

Table 17

Similarity of Friends' Plans by Post-High School Plan

Friends Have Similar Plans	Plan							
	Work		Vo-tech		College		Total	
	No.	%	No.	%	No.	%	No.	%
Yes	1209	49.5	733	58.5	1812	73.6	3754	61.0
No	1235	50.5	520	41.5	649	26.4	2404	39.0
Total	2444	100.0	1253	100.0	2461	100.0	6158	100.0

As indicated in Table 17, work group seniors split evenly on whether or not most of their friends have similar plans. In contrast, about three out of every four college group seniors responded affirmatively. The vo-tech seniors were intermediate between these two groups in their responses.

The Basic Education Opportunity Grant (BEOG) program is intended, as its name implies, to provide a basic grant to financially needy students so that they may begin or continue

postsecondary education. To reach its objectives, all eligible students should know of the existence of the BEOG, how to apply and where it may be used. Accordingly, the survey inquired whether or not the seniors knew about the BEOG and, if so, whether or not they planned to apply, or had already applied. Table 18 shows the frequency and percentage distributions of their responses.

Table 18

Knowledge of Basic Educational Opportunity Grant by Post-High School Plan

Knowledge of BEOG	Plan						Total	
	Work		Vo-tech		College			
	No.	%	No.	%	No.	%	No.	%
No knowledge	1559	63.2	625	49.4	1010	40.9	3194	51.5
Applied for grant	119	4.8	222	17.5	598	24.3	939	15.2
Plan to apply	194	7.9	217	17.1	401	16.3	812	13.1
Know, but won't apply	593	24.1	202	16.0	455	18.5	1250	20.2
Total	2465	100.0	1266	100.0	2464	100.0	6195	100.0

About half (51.5%) of the seniors had no knowledge of the BEOG, but this lack of knowledge was not distributed

equally according to post-high school plan. Table 18 indicates important differences, with nearly two-thirds (63.2%) of the work group professing no knowledge of the grants compared with 40.9% of the college group. Furthermore, fully 40.6% of the college group and 34.6% of the vo-tech group had either already applied or planned to apply for the grant, compared with only 4.8% of the work group. This disparity is consistent with the plans expressed by these groups, since the grants can be used only in connection with actual enrollment in an approved institution. However, the high overall percentage (51.5%) of those reporting no knowledge of the BEOG and the markedly higher percentage (63.2%) of the work group with no such knowledge would not seem supportive of the objectives of this massive grant program. It raises legitimate questions regarding whether or not there are sizable numbers of Arizona high school seniors who would have planned to pursue further education if they had known of a grant program designed specifically to entitle everyone, regardless of financial circumstances, to at least a basic minimum of financial aid. Knowledge of the BEOG is especially critical since it is intended to be the primary component of a financially needy student's aid package. It is gift, or nonrepayable, aid that may encourage students to add components they may not otherwise consider (such as loans) in order to build a financial aid combination sufficient to attend a school or college, no matter how

small their other resources (such as family financial support) may be.

Further information was sought concerning knowledge of other major financial aid programs, and the sources of their knowledge. Table 19 presents the first set of these data.

Compared with the previous table on knowledge of the BEOG, Table 19 shows much consistency of knowledge of the seven other basic financial aid programs among the three plan groups. Within this surprising degree of consistency, there are some predictable patterns, namely, that the work group ranks the lowest of the three groups in percentage of those reporting knowledge of the various programs with the exception of Social Security Education Benefits (SSEB) and Reserve Officers Training Corps (ROTC), where they rank second. The vo-tech group ranks highest in knowledge of the Supplemental Educational Opportunity Grant (SEOG), Guaranteed Student Loans (GSL) and SSEG; while the college group ranks highest in knowledge of the other four programs. The range of differences among the three groups is quite small (less than 10%) for all but two of the programs--College Work-Study (18.5%) and the College Financial Aid Program (13.8%). Perhaps the most interesting and even surprising finding in Table 19 is the extremely high rate of responses indicating knowledge of ROTC and the College Financial Aid Programs (69.0% and 67.5%, respectively), a

Table 19

Number and Percentage Reporting Knowledge of Financial Aid Programs by Post-High School Plan

Program	Plan							
	Work		Vo-tech		College		Total	
	No.	%	No.	%	No.	%	No.	%
Supplemental Educational Opportunity Grant	481	19.6	304	24.1	561	22.8	1346	21.8
College Work-Study Program	714	29.0	467	37.1	1170	47.5	2351	38.0
National Direct Student Loans	604	24.5	349	27.7	719	29.2	1672	27.0
Guaranteed Student Loans	573	23.3	347	27.7	642	26.1	1562	25.3
Social Security Education Benefits	816	33.1	432	34.2	669	27.2	1917	31.0
Reserve Officers Training Corps	1662	67.5	807	64.1	1797	73.0	4266	69.0
College Financial Aid Program	1511	61.2	862	68.2	1849	75.0	4182	67.5

rate that is more than twice the average rate for the other five programs. These two types of programs actively invest large amounts of time, effort and funds in disseminating information directly to prospective participants, much more so than the other five federal programs which rely on financial aid counselors in high schools and postsecondary institutions. Evidently, their efforts and investment of resources have "paid off" in high visibility to high school seniors.

Closely related to knowledge about the various financial aid programs is the source of this information. The seniors were asked whether or not they had received information about any of the seven financial aid programs from a variety of sources as listed in Table 20.

Table 20

Sources of Information about Financial Aid Programs by Post-High School Plan

Information Source	Plan							
	Work		Vo-tech		College		Total	
	No.	%	No.	%	No.	%	No.	%
High school counselor	1185	48.2	732	58.2	1532	62.4	3449	55.9
High school teacher	833	34.0	394	31.3	796	32.5	2023	32.8
Friends	1058	43.3	615	48.8	1186	48.3	2859	46.4
College	--	--	489	38.9	1267	51.7	1756	47.3
Parents/ relatives	878	35.8	533	42.4	1058	43.3	2469	40.1
Other	762	31.2	338	27.2	595	24.6	1695	27.7

The questionnaire (Appendix F) was somewhat more explicit about the sources than is indicated in Table 20. The category "Friends" included classmates; "College" was designated as the school or college the respondent planned to attend; and "Other" was exemplified as media, such as newspaper or TV. As one might expect in view of the differentiated function of high school staff, high school counselors ranked as the most frequently named sources of information, with "College" and "Friends" ranking next highest. Although teachers ranked low overall (32.8%), they were named as information sources by the work group more frequently (34.0%) than either by vo-tech (31.3%) seniors or by the college group (32.5%). Counselors were named as sources by high percentages of the college group (62.4%) and the vo-tech group (58.2%), but by less than half (48.2%) of the work group. The relatively low percentage (38.9%) of the vo-tech group who named the school or college they planned to attend as their source of information is somewhat surprising since many of these institutions, particularly proprietary schools, participate heavily in federal programs of financial aid for their students.

The Work Group

The remaining four sections in this chapter present the responses of each of the three post-high school plan groups, and plans for financing further education beginning with

those who did not plan to attend a school or college full-time next year. These seniors were asked to complete a separate section of the questionnaire, the one with questions expressly designed for them rather than for the other two plan groups. As indicated above, this group was designated as the "work" group for brevity, even though, as will be seen, many of them indicated plans other than work. Their responses to all of the items in their section are listed in a single table (Table 21) for conciseness and so that patterns of responses can be discerned more easily.

When asked "What will you probably do next year?" this group of seniors responded as shown in Table 21. Over two-thirds (68.0%) checked "work" as their plan for full-time activity. About 15% indicated that military service comprised their plan for next year. This represents a substantial number of seniors; projected to the entire graduating class, well over 1,000 Arizona high school graduates will enter military service soon after completion of their schooling.

Table 21

Responses to Questions for Seniors Planning to Work

Question		No.	%
Q. 30	Probable Activity Next Year		
	Work	1667	68.0
	Military Service	360	14.7
	Housewife	142	5.8
	Travel	162	6.6
	Other	120	4.9
	Total	2451	100.0
Q. 31	Type of Work, if Employed[3]		
	Service	419	25.1
	Secretarial	404	24.2
	Restaurant	188	11.3
	Sales	172	10.3
	Farm	63	3.8
	Laborer	265	15.9
	Apprentice	157	9.4
	Total	1667	100.0
Q. 32	Attitude Toward Importance of Further Schooling		
	Important, but Unaffordable	355	16.0
	Important, but Prefer Job	549	24.7
	Had Enough at School	269	12.1
	Will Work, Defer School	1047	47.2
	Total	2220	100.0
Q. 33	If Available, Would Necessary Money Be Spent for Further Schooling?		
	Yes	1233	55.6
	No	983	44.4
	Total	2216	100.0

Table 21 (continued)

Question	No.	%
Q. 34 If Available, How Much Money Needed for Schooling?[3]		
For All Expenses	588	47.7
For Half of Expenses	413	33.5
Small Amount Would Encourage Schooling	232	18.8
Total	1233	100.0
Q. 35 Teachers/Counselors Encouragement of Further Schooling		
Quite a Lot	500	22.4
Some	984	44.0
No Indication	688	30.8
Discouraged Idea	63	2.8
Total	2235	100.0
Q. 36 Part-time Schooling Planned for Next Fall?		
No	748	34.3
No, Maybe Later	371	17.0
Maybe, Will Wait and See	510	23.4
Yes, Vo-tech	214	9.8
Yes, College	138	6.3
Yes, Not Yet Selected	201	9.2
Total	2182	100.0

The responses to question 31 were to a non-hierarchical set of especially developed job descriptions intended to approximate the most likely types of jobs for eighteen-year-olds just out of high school rather than the typical U.S. Bureau of the Census taxonomy of the adult world of work. For example, the typical "professional" or "managerial" job designation would serve only as a distractor rather than a viable option for these seniors. In the questionnaire, examples were given for each category as in the following: "Laborer, for example, in a factory or mine, or on construction." About half of the work group plan to enter either "Service" or "Secretarial" types of employment. The remainder of the group was fairly balanced among the other five job types except for "Farm" which was chosen by only 3.8% of the group. Some of these job categories are, of course, traditionally oriented toward one sex, e.g., "Farm", "Laborer", "Secretarial", and "Apprentice".

Question 32 probed the work group seniors' attitudes toward the importance of further schooling. Their responses indicate a generally positive orientation toward further schooling. Nearly half (47.2%) indicated they planned to work until they decided what kind of further schooling they wanted; another 40.7% felt that it was important but that they couldn't afford it or that while further schooling was important, they preferred to work and learn on the job. Only 12.1% indicated a finalism toward further schooling, suggestive of a distinctly negative attitude.

The responses to Question 33 are consistent with those to previous questions, including the one immediately preceding. The question asked "If you had it, would you spend the money necessary for further schooling?" in an attempt to estimate the work group's attitudes toward more schooling with the barrier of financing hypothetically removed. Presumably the 44.4% who answered negatively include not only those who had "had enough of school" but those who see further schooling as important but prefer a job in their immediate future as well as those who want schooling, but some time in the future, not now. It is interesting to speculate how many of the 55.6% who would participate in further schooling if money were available include the nearly two-thirds of the work group who reported having no knowledge of the BEOG. (It is recognized that the BEOG or any other financial aid, singly or in combination, may well not be the decisive factor in orienting their plans toward schooling rather than work, military service or other non-educational activity.)

Of those who indicated they would spend money for further schooling if it were available, over 80% would need a large part (at least half) of their schooling expenses paid. An additional 18.8% reported that even "a little money" would influence them toward further schooling.

In response to Question 35, two-thirds of these seniors were encouraged either "Some" or "Quite a lot" by their teachers and counselors to attend further schooling. Teachers

and/or counselors of only 2.8% of the work group "Discouraged the idea". Again, some special facets of this group are most interesting. What are the characteristics (academic, socioeconomic and otherwise) of the 500 work group seniors who were encouraged "Quite a lot" to consider further schooling but who nonetheless did not plan to go?

Part-time attendance at a school or college was definitely planned by only one-fourth (25.3%) of these seniors next year (see responses to Question 36, Table 21). Over one-third (34.3%) gave an unqualified "No" in regard to whether or not they planned to attend part time, and another 40.4% reported either "Not next year, but maybe later on" or "Maybe, I'll wait and see". This somewhat negative picture should be tempered by consideration of the much more positive orientation toward full-time schooling indicated in previous questions.

The Vo-tech Group

Seniors who completed Section B of the questionnaire planned "to attend full time a trade, technical, or business school, or college program that leads directly to a job in two years or less", including one of the career education programs in a community college. As stated previously, this is the first study in Arizona comparing enrollments and student characteristics among various types of postsecondary educational institutions. A separate study is currently underway which is analyzing these data for differences

between Arizona seniors who plan to enroll in vo-tech programs at public versus those at proprietary (private, for profit) schools. This study is being conducted by Mr. Frederick Gaudet and is scheduled for completion by early fall, 1977. It will be available through the Center for Higher and Adult Education at Arizona State University.

The responses of the vo-tech group to all of Section B plus an additional question are presented in Table 22. As indicated in the responses to Question 37 concerning the type of school which they plan to attend, less than half (43.8%) plan to attend career education programs in local (Arizona) community colleges. Thus, very substantial numbers of Arizona seniors will enroll in the considerable variety of other vo-tech schools in the state. The Arizona Commission on Postsecondary Education identified well over 300 postsecondary schools and colleges of all descriptions in a 1976 inventory of such institutions. Of those which offer vo-tech types of programs virtually all but the publicly-supported community colleges are proprietary. Compared with the nearly cost-free community colleges, most such schools are quite expensive. Yet, as these data show, they continue to attract a significant share of each year's "crop" of high school graduates. Perhaps part of their attractiveness, as suggested in the foregoing review of literature (Chapter II), is that they offer intensive, focussed programs with little emphasis on general, non-vocational courses and good placement

records along with vigorous recruitment of potential students. The trade or technical type of school is next highest (23.3%) in popularity, with no other type garnering more than about 10% of the group. The percentage of vo-tech seniors who checked "Other" (9.1%) may be planning to enroll in any variety of schools or colleges that did not seem to be included in the categories offered, for example, schools of luthiery or horseshoeing.

The responses to Questions 38 and 39 indicate unusually high rates of previous parental attendance at vo-tech schools or colleges. The percentage of fathers who attended (27.8%) is extremely high compared with the 10.7% reported for the entire sample (Table 8); similarly, the rate of mother's attendance (19.4%) is much higher than the 7.4% reported for the entire sample (Table 9). It should be noted that the percentages of positive responses to Questions 38 and 39 are higher than the percentages indicated for parental educational attainment (Questions 9 and 10); however, the questions are not the same since the latter set is somewhat more inclusive. Also, the questions regarding parental participation in vo-tech education in Section B are, because of context, more likely to elicit positive recall of their father's or mother's attendance at a vo-tech type of school. All of the responses on this topic reinforce the suggestion of a strong link between parental prior involvement and these seniors' plans to attend vo-tech schools.

Table 22

Responses to Questions for Seniors Planning Vo-tech Programs

Question		No.	%
Q. 37	Type of School		
	Business	132	10.5
	Cosmetology	93	7.4
	Health Professions	74	5.9
	Community College	547	43.8
	Trade/Technical	292	23.3
	Other	114	9.1
	Total	1252	100.0
Q. 38	Did Father Attend Vo-tech School?		
	Yes	325	27.8
	No	846	72.2
	Total	1171	100.0
Q. 39	Did Mother Attend Vo-tech School?		
	Yes	225	19.4
	No	936	80.6
	Total	1161	100.0
Q. 40	Vo-tech Program Same as Present Job?		
	Yes	280	28.5
	No	702	71.5
	Total	982	100.0
Q. 41	Why College Degree Program Not Chosen		
	Want to be Independent	274	26.4
	Dislike General Courses	169	16.3
	Like Vocational Courses	269	25.9
	Will Seek College Degree Later	325	31.4
	Total	1037	100.0
Q. 42	Already Applied to Chosen Vo-tech School?		
	No	484	42.9
	Still Undecided	267	23.7
	Yes	377	33.4
	Total	1128	100.0

Table 22 (continued)

Question		No.	%
Q. 43	Source of Information About Prospective School		
	Parents/Relatives	211	19.3
	Friends	206	18.8
	High School Teachers/Counselors	215	19.7
	School Brochures	159	14.5
	School Representatives	140	12.8
	Media (TV, etc.)	16	1.5
	Still Undecided	146	13.4
	Total	1093	100.0
Q. 44	Importance of School's Placement Service		
	Not Important	191	17.9
	Somewhat Important	436	40.9
	Very Important	440	41.2
	Total	1067	100.0
Q. 57	Plans for Working Next Year During Vo-tech Program		
	1 - 10 Hours per Week	152	15.8
	11 - 20 Hours per Week	285	29.7
	21 - 30 Hours per Week	255	26.6
	Over 30 Hours per Week	137	14.3
	None	130	13.6
	Total	959	100.0

Question 40 asked whether or not the seniors planned to enroll "in a school or college career program that is in the same type of work as your present job?" The high (71.5%) rate of negative responses is not surprising when one considers that these vo-tech seniors generally have the same kinds of temporary, unrewarding jobs typical of others in their high school class (see Table 14). For example, well over half (57.1%) have either a "Service" (hourly wage work such as in a gas station or supermarket) or "Restaurant" (busboy, waitress) type of present job. Only 4.8% are in apprenticeship jobs that presumably lead to a better career. It is not surprising that the general thrust of the responses of these vo-tech seniors is the desire for a timely entry into a financially rewarding and satisfying career.

One of the most interesting questionnaire items was that inquiring why the vo-tech seniors "were not planning to work toward a four-year degree by attending a college or university?" The largest response (31.4%) to any of the answers listed in Question 41 was that expressing an interest in a four-year degree at some later unspecified time. However, the largest total response (42.2%) was that combined for the second (16.3%) and third (25.9%) options, both of which expressed slightly different facets of a strong affinity for career-related courses and a dissatisfaction with general (academic) courses. Finally, more than a quarter (26.4%) of these seniors simply selected the straightforward

"I want to be on my own in two years or less." Obviously, the choices offered as the only four possible responses are not mutually exclusive. Presumably, many of these seniors could legitimately have checked all four, expressing a desire for financial emancipation, a dislike for general compared with career courses, and a deferred interest in a four-year degree. The "forced-choice" format, however, requires a selection of the most compelling response and is insightful for that reason.

Only one-third (33.4%) of the vo-tech seniors had already applied to their chosen vo-tech school or college (see responses to Question 42, Table 22). Typically, early applications to such programs are not as critical (unless they are usually over-enrolled) for acceptance as for four-year degree programs.

The responses to Question 43 about the main source of information about the selected school were very evenly divided. This pattern should be of interest to vo-tech school administrators, high school counselors and others interested in vo-tech education. For example, "School brochures" (14.5%) and "School representatives" (12.8%) are both listed less often than either "Parents and/or relatives" (19.3%) or "Friends and/or other students" (18.8%). Teachers/counselors are indicated by only 19.7%, presenting an altogether diffused picture which may be suggestive of the need for more focussed publicity and recruitment efforts.

As depicted in the responses to Question 44, interpretation is evident and straightforward: placement service is important to all but 17.9% of these seniors. Presumably, these particular respondents already have career opportunities awaiting them upon completion of their program, or have confidence in their own efforts in finding a job.

All but a few (13.6%) of these seniors planned to work next year during their vo-tech program. This is not particularly surprising in view of their career orientation and lack of financial resources discussed above. However, as indicated by the responses to Question 57 (presented in Section C) these vo-tech seniors planned a very heavy work schedule. Over forty percent will work either 21 to 30 hours per week (26.6%) or over 30 hours per week (14.3%). However, many of these vo-tech programs are academically demanding and intensive. These vo-tech seniors may be somewhat unrealistic in their expectations of heavy work schedules and may find themselves with problems in financing or in coping with the educational requirements of the programs.

The College Group

This section discusses three main topics relating to the responses of the college group as presented in Tables 23, 24 and 25. They deal with college selection and plans for attendance, reasons for planning to live at home while attending college and reasons for living away from home while attending college, respectively.

Table 23

Responses to Questions about College Selection and Attendance for Seniors Planning College Programs

Question	No.	%
Q. 45 What College/University Will You Attend?		
Arizona State University	486	19.7
Northern Arizona University	380	15.3
University of Arizona	418	16.9
An Arizona Community College	735	29.7
An Arizona Private College	30	1.2
Out-of-state Private College	228	9.2
Out-of-state Public College	199	8.0
Total	2476	100.0
Q. 54 If You Could Afford It, Would You Attend College Outside of Arizona and the Southwest?		
Yes	1370	56.6
No	1051	43.4
Total	2421	100.0
Q. 55 To How Many Colleges Have You Applied?		
One	919	37.6
Two	424	17.4
Three	318	13.0
Four or More	134	5.5
None Yet	647	26.5
Total	2442	100.0
Q. 56 Most Important Reason for College Attendance		
Career Preparation/Good Income	1766	73.3
Intellectual Attainment	143	5.9
Better Quality of Life	478	19.8
Sociability	25	1.0
Total	2412	100.0

Table 23 (continued)

Question	No.	%
Q. 57 Plans for Working During First College Year		
None	484	19.8
1 - 10 Hours per Week	477	19.5
11 - 20 Hours per Week	789	32.3
21 - 30 Hours per Week	392	16.1
Over 30 Hours per Week	298	12.3
Total	2440	100.0

In Table 23, the first data set is the responses to Question 37 which asked the college group seniors to indicate the college or university they planned to attend (or are most likely to attend). Slightly over half (51.9%) plan to attend one of the three Arizona universities, with Arizona State University as the most popular choice (19.7%), followed by the University of Arizona (16.9%) and Northern Arizona University (15.3%). The Arizona community colleges were indicated as the selected institution by 29.7% of these seniors, a percentage that presumably has been on the increase consistent with the recent rapid growth of these colleges--especially since all but a very small percentage of their enrollment is comprised of in-state students. The projected enrollments of these seniors in Arizona institutions is rounded out by the 30 (1.2%) sampled seniors who planned to attend one of the small number of institutions designated as private colleges. The balance of the college group seniors plan to

attend out-of-state private (9.2%) or public (8.0%) colleges. This pattern is consistent with enrollments in most Western, especially Rocky Mountain, states with small private sectors.

The college group seniors were asked in Question 54, "Would you attend college in a different part of the country if you could afford it?" It is not at all obvious why so large a percentage (56.6%) answered affirmatively, since the public sector of higher education in Arizona collectively offers the full range of program opportunities, from the most advanced and specialized professions to tuition-free community colleges with few, if any, academic restrictions for Arizona high school graduates. Obviously, adverse weather could hardly be a significant factor since much of the academic year finds Arizona filled with visitors from less benign climates. One partial explanation may be the dearth of private colleges, both nondenominational and church-related, in Arizona. Perhaps many of these seniors would attend private colleges elsewhere if they "could afford it". For whatever reason, the rate of affirmative responses indicates a potential exodus of Arizona students of very considerable magnitude, certainly far beyond the out-migration rate now current in nearly all states.

The distribution of responses to Question 55 is quite typical of the number of colleges applied to by most first-time students. The more than one-fourth (26.5%) who had not

yet applied as of late March before graduation may seem somewhat large. This may represent some procrastinating students who will ultimately not enroll next year, and also many who will find it possible to enroll in community colleges with less lead time involved than with universities.

The responses to Question 56 may be disturbing to many with certain, especially traditional, assumptions about why students attend college. The question asked the college group seniors to indicate their one most important reason for attending college from among the following: "To prepare for a career and earn a good living", "For intellectual attainment", "To help myself to prepare to live a better life", and "To meet people and have a good social life". Those who assume most, or even a sizable minority of students are interested in intellectual pursuits (learning for its own sake) will be disappointed in the small (5.9) percent who checked this option. At least according to these data, the most important reason for nearly three-fourths (73.3%) of the college-bound seniors is strongly and distinctly career oriented. About one-fifth (19.8%) did indicate a somewhat more altruistic goal related to preparing for a better life. Incidentally, it be of no encouragement to note that most studies of college students goals have shown changes to be in the direction of more vocationalism as students progress through their college career.

As was true for the vo-tech group, most of the college-bound seniors planned to work during their first college year (see Question 57, Table 23). Of the nearly four-fifths who plan to work, however, most of these plan moderate work schedules of 11 to 20 hours per week, or lighter work schedules of 1 to 10 hours weekly. The approximately one-fifth who plan to work 21 to 30 or more than 30 hours weekly while attending college full-time may be in for a difficult time if they drastically underestimate the demands on their time imposed by a full credit load in a college or university.

The college group seniors completing their designated section (C) of the questionnaire were instructed to answer either one of two sets of four specially designed questions relating to their housing arrangements for their first year in college. The first set was for those who planned to live at home while attending college next year; the second set was for those who did not plan to live at home. Their responses are presented in Tables 24 and 25.

Table 24

Responses to Questions for Seniors Planning College Programs Who Expect to Live at Home

Question		No.	%
Q. 46	College Selected Because Commuting is Inexpensive?		
	Yes	672	57.3
	No	500	42.7
	Total	1172	100.0
Q. 47	Familiar Home Surroundings Advantageous?		
	Yes	802	71.8
	No	316	28.2
	Total	1118	100.0
Q. 48	If Commuting Unavailable, Could You Attend College?		
	Yes	620	57.2
	No	464	42.8
	Total	1084	100.0
Q. 49	Commuter College Selected to Test Success in College?		
	Yes	271	25.4
	No	797	74.6
	Total	1068	100.0

There are, of course, many specific types of housing that college students may have while enrolled, e.g., college dormitories or apartments, fraternities or sororities, their own rented rooms or apartments, living in the parental home or with relatives, etc. For general analyses, these differing arrangements may be dichotomized into living at home with parents (or relatives) versus a domicile separate from their home, whether it is in their home community or not. These two arrangements differ substantially in terms of out-of-pocket living expenses for the student, in encountering a new and different living environment, in the opportunity to meet new acquaintances, in the likelihood of participation in college-related social activities and in other important factors. The responses in Table 24 are to four questions directed at the college-bound seniors who plan to live at home. The first of these, Question 46, asked "Will you be attending the college you picked mainly because you can save money by living at home?" This question is closely related to Question 48 which asked "If the local college were not available, could you afford to attend a college away from home?" The response distribution was virtually the same to both questions, about 57% "Yes" and 43% "No". The overall finding suggested by these two responses is that the financial savings effected by living at home is <u>not</u> the overriding reason for anywhere near a clear majority of these community students even though such motivation is often

advanced as the primary reason.

Perhaps a salient clue is offered in the responses to the intervening question, number 47, which stated in full: "Do you feel that being in familiar home surroundings is an advantage when you begin college?" A clear and substantial majority (71.8%) agreed with this statement. There may well be considerable informal, even subconscious, self-analysis involved concerning the range and amount of simultaneous new types of experiences that these seniors expect to cope with successfully during their first college year.

Conversely, these seniors rejected the implication that their chances of academic success were uncertain enough to warrant staying at home while giving college a "trial". The full question was "Are you attending this college to see if you can succeed in college, but not have to leave the area to find out?" Three-fourths (74.6%) of these seniors rejected this implication as their reason for choosing to live at home while attending college during their freshman year.

Table 25 contains the responses to the four questions for college-bound seniors who do not plan to live at home while attending college the first year after high school. Partly to ascertain whether or not financial aid was centrally involved in this decision, Question 50 asked if the respondent had received a grant to attend his or her chosen college. As indicated, only one-fifth (20.3%) answered affirmatively, suggesting that this particular factor was not involved for the large majority.

Table 25

Responses to Questions for Seniors Planning College Programs Who Do Not Expect to Live at Home

Question		No.	%
Q. 50	Have You Received Grant to Attend Selected College?		
	Yes	261	20.3
	No	1024	79.7
	Total	1285	100.0
Q. 51	College Selected to Enable Living Away from Home?		
	Yes	237	18.9
	No	1015	81.1
	Total	1252	100.0
Q. 52	College Selected Because of Particular Program?		
	Yes	769	64.8
	No	418	35.2
	Total	1187	100.0
Q. 53	Attendance at Selected College a Financial Hardship?		
	Yes	527	45.5
	No	631	54.5
	Total	1158	100.0

The next question (number 51) probed a different type of motivation, that of a need for independence: "Did you choose this college mainly because you want to begin living away from home as soon as possible?" A very substantial majority (over 80%) rejected this concept as the main part of their decision.

Nearly two-thirds (64.8%) of this subgroup of college-bound seniors, however, did indicate that the availability of a particular program was a major factor in their decision (see Question 52, Table 25).

Finally, a little less than half (45.5%) of these seniors indicated that attendance at their selected college would be a hardship on them or their family (Question 53, Table 25).

To sum up, the total pattern of responses to these two sets of questions directed to commuting versus non-commuting students is not unambiguous. That is, a clear picture of the motivation(s) for this important decision about their first year at college does not emerge from these findings. Several factors do seem to be eliminated that would otherwise be routinely assumed, or at least be counted as "obvious" possibilities. A very substantial minority (42.7%) did not plan to commute simply because it would be inexpensive, and more than half (57.2%) of them could attend college even if a commuting opportunity were not available. Large majorities did feel that familiar (commuting) home surroundings would be

advantageous (71.8%) and that their commuting plan was not (74.6%) selected in order to inexpensively test their chances of academic success. For those who planned to live away from home during their first year of college, more than half (54.5%) did not expect to find this arrangement a financial hardship. Clear majorities of these students indicated their reasons as availability of a particular program (64.8%) and that living away from home was not (81.1%) the basis for selecting the college they chose. Furthermore, obtaining a grant to attend a particular college was a possible factor in college selection for only 20.3% of these seniors.

Clearly, some decisive questions about the decision of whether or not to live at home the first year in college remain to be asked of future Arizona high school seniors.

Plans of the Vo-tech and College Groups for Financing Further Education

Both the vo-tech and college groups of seniors were asked to respond to Questions 58 through 62, all of which involved their plans to pay for their schooling costs next year. These data are presented in the final Table of this report, number 26.

Inclusion of these questions in this survey represents a preliminary and exploratory investigation of the vital topic of financing post-high school education.

Table 26

Responses to Questions on Financing Schooling Costs for Seniors Planning Vo-tech or College Programs

Question	Vo-tech		College	
	No.	%	No.	%
Q. 58 Job Earnings Will Pay:				
None of Schooling Costs	184	20.2	495	20.7
Some of Schooling Costs	395	43.4	1352	56.6
Half of Schooling Costs	101	11.1	190	7.9
Most of Schooling Costs	140	15.4	243	10.2
All of Schooling Costs	90	9.9	110	4.6
Total	910	100.0	2390	100.0
Q. 59 Parents Will Pay:				
None of Schooling Costs	296	32.0	450	18.5
Some of Schooling Costs	306	33.0	810	33.3
Half of Schooling Costs	82	8.9	217	8.9
Most of Schooling Costs	151	16.3	693	28.6
All of Schooling Costs	91	9.8	260	10.7
Total	926	100.0	2430	100.0
Q. 60 Grant or Scholarship Will Pay:				
None of Schooling Costs	480	54.2	1196	51.0
Some of Schooling Costs	174	19.6	638	27.2
Half of Schooling Costs	61	6.9	156	6.6
Most of Schooling Costs	94	10.6	266	11.3
All of Schooling Costs	77	8.7	91	3.9
Total	886	100.0	2347	100.0
Q. 61 Loan Will Pay:				
None of Schooling Costs	672	76.6	1863	80.6
Some of Schooling Costs	115	13.1	353	15.3
Half of Schooling Costs	35	4.0	41	1.8
Most of Schooling Costs	42	4.8	39	1.7
All of Schooling Costs	13	1.5	14	.6
Total	877	100.0	2310	100.0

Table 26 (continued)

Question	Vo-tech		College	
	No.	%	No.	%
Q. 62 Personal Savings Will Pay:				
None of Schooling Costs	374	42.0	922	39.2
Some of Schooling Costs	371	41.6	1195	50.7
Half of Schooling Costs	43	4.8	74	3.1
Most of Schooling Costs	59	6.6	113	4.8
All of Schooling Costs	45	5.0	51	2.2
Total	892	100.0	2355	100.0

The responses to Question 58 show considerable similarity between vo-tech and college-bound seniors in the extent to which job earnings will help finance schooling costs. There is a fairly strong tendency for the vo-tech students to rely more heavily on this source. Well over one-third (36.4%) of the vo-tech seniors expect to finance at least half of their schooling costs by job earnings compared with 22.7% of the college group.

Much stronger differences are revealed between the two groups in anticipated parental financing of schooling costs. In response to Question 59, nearly forty percent (39.3%) of the college group reported that parents will pay most or all of the costs compared with about one-fourth (26.1%) of the vo-tech group. In further contrast, only 18.5% of the college group expected no parental financing compared with about one-third (32.0%) of the vo-tech group.

Perhaps surprisingly, the vo-tech group anticipated faring as well as the college group in terms of grant or scholarship support (see Question 60, Table 26). In fact, 8.7% of the former group expected full financing compared with only 3.9% of the college group. The following question (number 61) was closely related as it dealt with loans, another aspect of outside financial aid. Consistent with their responses to the preceding question on gift aid, the vo-tech group planned to rely more heavily on financial aid than their college-bound counterparts. Over ten percent (10.3%) of the vo-tech seniors will use loans to pay at least half of their schooling costs compared with only 4.1% of the college group.

Finally, the two groups differed only slightly in their anticipated reliance on personal savings as indicated in their responses to Question 62. There is, however, a tendency for the college group to rely a bit less heavily on their own savings than the vo-tech seniors, with 10.1% of the former group expecting to pay half or more of the costs compared with 16.4% of the vo-tech seniors.

The topic of financing post-high school education is exceedingly complex, and these data are to be interpreted more as potential guidelines for full study, rather than definitive answers. Implications for possible further study on this, and other topics included in this benchmark study, are discussed in the following final chapter.

Chapter V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study investigated the post-graduate plans of high school seniors in Arizona. As the first of its type, it is expected to provide benchmark findings against which future changes can be measured and compared.

Postsecondary educational planning needs in Arizona for the years immediately ahead indicate that data of the type gathered in this study are most timely for several reasons. The structure of postsecondary education in Arizona has, in recent years, recently achieved mature development (especially with the full growth of the community college system) and has broadened to include proprietary schools and colleges, private institutions of higher education, as well as traditional types of colleges and universities. The first statewide-administered program of financial aid to students was begun in 1977. Also, continuing problems of fluctuating enrollments in postsecondary institutions and high unemployment rates of youth indicated that a study of this type could result in highly useful findings.

Summary

Primarily because of the funding scheduled by the Commission, the study was conducted in two phases, the first of which was a pilot survey conducted in the spring of 1976 to provide overall research guidelines, instrumentation, field experience, analytical models, and a data base which would effectively and

completely prepare for the large-scale study reported herein. The results of the pilot study included the following:

1. The conceptual framework for the overall study was developed including consideration of the transition or flow from high school to post-high school activities as consisting of three distinguishable and mutually exclusive streams, namely, seniors who did not plan to participate in further education after graduation, those who planned to attend a trade, technical or business school to prepare for a career not requiring a baccalaureate degree, and those seniors who planned to attend a college or university program leading to a 4-year baccalaureate degree.

2. A vast amount of research literature was reviewed and organized drawing upon findings from the fields of sociology, psychology, economics, and educational research.

3. The sampling and data-gathering procedures were tested and found to be completely workable for the overall study.

4. The questionnaire was developed and field tested and, after modification, used directly in phase II.

5. Procedures for administering and collecting the questionnaires were thoroughly tested as were techniques for processing the resulting data.

The overall research objective of the study is to provide a data source potentially useful to all citizens and institutions of postsecondary education, to manpower and employment agencies, and to Arizona's high schools for use in improving academic programs and counseling. Several other useful outcomes were expected, including data useful to guidance counselors in advising high school seniors during the time that postgraduate plans are being developed and to furnish postsecondary institutions with information to assess admissions procedures and financial aid policies.

Literally hundreds of research sources were reviewed in

preparation for this study. Many of them are summarized in Chapter II of this report (pages 13-72) and all are listed in the extensive bibliography in Appendix A following the present chapter. Salient features of the research literature follows.

Decisions about postgraduate activities have been revealed as both multi-faceted and as a long-term process, beginning probably with the earliest acculturation of the child in the home. Consequently, several important researchers feel that only a multivariate approach is useful in studying the transition from high school to post-high school activities. Some of the important variables influencing decisions about post-high school plans are: (1) local availability of a college opportunity (2) counseling processes in high school (3) academic ability and achievement (4) social status (5) peer influence (6) financial resources, and (7) parental influence.

Many states have conducted studies of the post-high school plans of seniors. Some seventy-one reports were located and consulted for the present study, and of these, Chapter II includes reviews of seventeen such studies from twelve different states, including Indiana, Florida, Wisconsin, Washington, Washington, D. C., Hawaii, Idaho, Iowa, New Jersey, North Dakota, Oregon, Tennessee and Utah. Nearly all of the state-wide surveys reviewed were conducted since 1972. There was considerable variation among the states in the percentages of high school seniors who planned to enter either traditional baccalaureate programs or postsecondary occupational programs, ranging from a low of approximately 50% in Tennessee to

approximately 75% in Hawaii. The states which conducted repeated surveys reported a good deal of consistency of post-high school plans over the period of years studied.

Studies which specifically examine the transition from high school to college typically dealt with either access to or choice of college. In terms of determinants of college-going, numerous studies have revealed the wide range of related factors. Generally, the likelihood of college attendance increases with socioeconomic status and with academic indicators, although not independently of one another. Some of the researchers ascribed more influence to socioeconomic factors than to academic factors when the two were studied independently. In addition to the intrinsic factors of intelligence and socioeconomic background, some researchers emphasized the significance of certain external factors such as accessibility of college and financial barriers. In terms of choice of college, many researchers have identified strong relationships between selectivity and prestige of institution and the same types of variables related to college-going, namely socioeconomic status and academic factors. Generally, the greatest single external factor in increasing access to higher education is the recent mushrooming of numbers of public two-year colleges. However, this type of college is found to attract disproportionately large numbers of students from low socioeconomic status and relatively poor academic records.

Few researchers have studied the transition from high

school to vocational-technical types of postsecondary programs, even though enrollments in this type of institution has continued to grow at a spectacular rate, both in public two-year community colleges and in the non-tax supported proprietary schools. Seniors who planned this type of postsecondary education tend to be somewhat dissatisfied with their high school education and generally do not wish to pursue four more years of general studies. They tend to come from lower socioeconomic strata and have poorer academic records than seniors planning baccalaureate programs. The research literature was not in agreement on significant differentiation between vocational-technical students in public two-year community college programs versus those in proprietary schools. Generally, there were more similarities than differences.

There were very few studies of the transition from high school to non-educational activities such as employment or military service, despite the fact that a high school education (typically with the liberal arts emphasis) as a rule provides youngsters with few marketable skills. Many of the researchers cited poor employment and career counseling in high schools, and poor articulation between high school programs and employment services. Generally, it would seem that youth who do not plan further education beyond high school are often left to drift into a wide variety of low-level entry types of jobs. Typically, such seniors are the least academically able and from the lowest socioeconomic status of the three transition groups defined for this study, although it is also obvious

that many highly able youth seek employment directly either as a deliberate choice or by force of circumstance.

Student financial aid policies have, since World War II, focused first on increasing access to postsecondary education, then sought to widen the choice of type of college, and has most recently focused on retention and assistance in completion of postsecondary programs. The basis for granting student financial aid has moved from awarding of an academic prize regardless of financial need to an almost totally need-based consideration deemphasizing academic record or potential. Until recently, most decisions regarding the awarding or denial of student financial aid was made at the institutional level, however, the growth of state scholarship commissions and (especially) the development of massive financial aid programs at the federal level have moved the source of most decisions from the institution to state and federal agencies. Even though the dimensions of student financial aid have increased from a relatively low level shortly after World War II to approximately 9 billion dollars per year currently, some researchers identify a significant gap between availability of funds and the need for such funds, especially as college costs continue to rise at a faster rate than inflation.

Since the pilot phase tested the conceptual framework, developed and tested a data-gathering instrument, and provided experience in the procedures of administering the instrument, the full-scale comprehensive survey administered in the spring of 1977 was enhanced by the experiences and results of the

previous year's preliminary study. Careful consideration of several survey approaches resulted in the selection of on-site administration by school personnel of a specially designed questionnaire.

High school senior respondents for phase II of the study were selected through sampling techniques of stratification, systematic selection, and clustering. All Arizona public high schools were used as primary sampling units and were stratified on the basis of geographic location, size of senior class, and racial/ethnic composition. These three matrices defined eighteen possible strata, fifteen of which contained clusters of high schools for potential selection. Random selection was made within each of the fifteen strata, resulting in a total of forty-five sampling units (schools), comprising approximately one-third of all public high schools in Arizona. The total estimate of seniors graduating from the forty-five survey schools is 10,914. Of these, well over half (57.1%) of the estimated graduating seniors provided usable responses for the survey. Monitoring of the administration of the questionnaires within the schools assured the researchers that there was no significant bias connected with participation or non-participation, with the latter resulting almost entirely from administration of the questionnaire to only half of the potential classes in the medium and larger schools, or to absences by individual students on the day the questionnaire was administered.

The large sample was used to provide capabilities for

directly examining many bivariate distributions in the resulting data. The questionnaire was developed along lines defined by the review of literature and the conceptual framework, namely, the collection of data common to all seniors through items concerning family background and academic interest, followed by structured sections focusing on seniors grouped by post-high school plan (employment, vocational-technical, or college). In addition, specific information was gathered on knowledge of and use of student financial aid. Thus, a large number of research topics were covered among the three groups with a relatively small number of common items.

The questionnaires and related materials were delivered to the schools in late March and collected from the schools by the end of April, 1977. The questionnaire answer sheets were processed by an optical-scanning device in order to reduce costs and increase accuracy. The survey data on the resulting computer tape were analyzed on the digital computer at Arizona State University using a programmed routine which generated cross-tabulated data as well as various measures of association.

Conclusions

The research design used in this study viewed transition from high school to post-high school activities as existing in three distinguishable and mutually exclusive flow streams. The extensive findings presented in the preceding chapter confirmed the preliminary indications of the pilot study, namely, that this approach to data gathering was not only

intuitively appealing but would result in valid and clear-cut comparisons among groups which differed along basic and fundamental dimensions. This section will present statistical "profiles" of each of the three groups which will delineate their primary characteristics based on the information they provided about themselves. First, however, it is useful to provide a "pooled" basis of comparison on data common to all three groups.

The total number of usable questionnaires is 6,319. Of these, forty percent (2,525) of the respondents indicated that they did not plan to attend any school or college full-time next year, and, since a large majority of these seniors reported that they plan to be employed, they are designated as the "Work" group. The term "Vo-tech" refers to the 1,295 (20.5%) of the respondents who indicated that they plan to attend full-time a career or occupational program rather than a four-year baccalaureate degree program. The third group comprised the 2,499 (39.5%) of the respondents who reported that they planned to "attend full-time a college or university program leading to a four-year baccalaureate degree," and are referred to as the "College" group in this report.

The total group of respondents was divided nearly equally between females and males, and corresponded quite well to the expectation that nearly all of them would be either 17 or 18 years of age near the end of their year of high school graduation. The distribution of racial/ethnic background revealed that about three-fourths of the seniors were White, with the

next largest group Mexican-American (13.0%) and the remaining 11.7% divided among American Indian, "Other," Black American, and Oriental, in that order. The estimated family income of the respondents indicated that slightly over one-fifth (22.1%) reported $9,000 per year or less and for about one-fourth their income was over $20,000 per year, with the remainder divided almost equally in the three intermediate categories. Nearly half (47.3%) of the seniors indicated their high school grade average was "B", about one third (32.0%) recorded a "C", and 17.8% achieved an "A". About 3% recorded a "D" or less. The educational attainment level of the fathers of these seniors was somewhat higher than their mothers. Over one-fourth of the fathers (26.6%) have a four-year collegiate or baccalaureate degree compared with 15.4% of the mothers. Conversely, 58.3% of the mothers achieved either grade school or high school completion compared with 45.3% of the fathers in these categories. About one-third of the respondents' fathers were in managerial or professional types of occupations. About one-half (49.6%) of their mothers were reported as "housewife" with only 7.3% of them in professional occupations. The modal type of occupation for fathers was "skilled" (25.6%), while 18.5% of the mothers were listed as "secretarial." Nearly 60% of the seniors were employed during the school year, and of these, many worked a large number of hours per week; nearly half (48.6%) were employed at least 21 hours per week. They tended to work in typical kinds of employment for high school students, namely, service types of jobs such as working in a

gas station (32.9%), restaurant work such as waitress or busboy (26.1%), with secretarial (16.4%) and sales (10.4%) also listed frequently. Slightly more than forty percent of these seniors had at least one older brother or sister attending college. In terms of parental attitude toward their post-high school plan, over three-fourth of the seniors' parents either "approve" (49.4%) or are "enthusiastic" (27.2%) about their choice, 15.3% were reported as "indifferent," with the balance of 8.1% either "not in favor" or "strongly disapprove." Potential peer influence was indicated by 61.0% of the friends of the seniors who had similar post-high school plans, compared with 39.0% who did not have similar plans. More than half (51.5%) of the seniors had "no knowledge" of the Basic Educational Opportunity Grant porgram. Only 15.2% applied for the grant by the time of the survey in late March in their senior year. Over two-thirds of the seniors reported knowledge of financial aid programs offered by a specific college or university (67.5%) or through the Reserve Officers Training Corp (69.0%). However, much smaller percentages knew about the Supplemental Educational Opportunity Grant (21.8%), the College Work Study Program (38.0%), the National Direct Student Loans (27.0%), the Guaranteed Student Loans (25.3%), or the Social Security Education Benefits (31.0%). The most popular source of information about financial aid programs was the high school counselor (55.9%), although nearly half of the seniors had received similar information from friends or directly from a college or university. A substantial number of seniors also reported receiving infor-

mation from other sources such as parents/relatives or high school teachers.

The Work Group. A composite profile of the "work" group reveals that in many ways this is the most diverse and amorphous of the three plan groups. In one sense, this is understandable since the seniors in the work plan group actually have a diversity of plans although over two-thirds (68.0%) indicated "work" as their plan for full-time activity after graduation (hence, the designation for this group). About 15% indicated that military service comprised their plan for next year, representing a substantial number of Arizona seniors. The remaining three categories of probable activity for the next year (housewife, travel, and "other") were indicated by small percentages of these seniors.

Of the three groups, the work group was the only one that contained more males by a slight margin than females, (51.9% and 48.1%, respectively). They also tended to be slightly older than the other two groups of seniors seeking education beyond high school; 48.4% of the work seniors were 18 or older, a percentage that was substantially higher than for the other two groups. Their racial/ethnic distribution corresponded almost exactly to the distribution for the total sample.

As a group, the work seniors ranked lowest in many of the variables related to planning for post-high school education, and thus can be regarded as the most disadvantaged of the three groups of seniors. For example, they ranked the lowest

of the three groups in high school grade point average by a substantial margin. Their estimated family income, while not the lowest of the three groups, was lower than the overall average, especially in the two highest income categories ($15,000 and over per year). The educational attainment of both fathers and mothers were virtually tied for lowest (with vo-tech) of the three groups, as was the percentage of mothers who were reported as having a "professional" type of occupation. In terms of their own employment, they were by far the most involved of the three groups, with nearly two-thirds (64.2%) of them employed and more than one-half (53.0%) working at least 21 hours per week, including a surprisingly high percentage (23.0%) who worked more than 30 hours per week. There were practically no differences in the type of job that they held during the school year compared with the other two groups. Apparently, all of the three plan groups shared somewhat equally in the low-level types of employment typically available to high school seniors.

Significantly, the work seniors had the lowest percentage of the three groups reporting number of older siblings in college, and their parents' attitude toward their post-high school plan was strikingly less supportive than the other two groups. For example, while less than one-fourth (24.4%) of the total sample reported their parents as either "indifferent," "not in favor," or "strongly disapprove," nearly forty percent (38.5%) of the work group reported such parental attitudes. About half of the work group reported that their friends did <u>not</u> have similar post-high school plans. Finally,

this group indicated a general pattern of the least amount of knowledge of most of the student financial aid programs, including BEOG, SEOG, CWS, NDSL, and GSL. Furthermore, they reported the lowest percentages for four of the six information sources about financial aid program, including high school counselor, friends, parents/relatives, and college sources. A summation of this composite profile suggests low academic apptitude or interest (although it is well to remember that fully 214 of this group achieved an "A" average), a relatively disadvantaged socioeconomic background in terms of family income and parental educational attainment and occupation, a high level of involvement with employment during high school, a nonsupportive parental attitude toward their plans, and little knowledge of opportunities for student financial aid.

The work group seniors, as did the other two plan groups, responded to a number of items on the questionnaire intended exclusively for their group. These responses help to "round out" their group profile. Generally, the items focussed on their attitudes toward education beyond high school. For example, they were asked directly to check one of a number of statements about their attitude. Only 12.1% checked the one statement that was unequivocally negative ("I've had enough of school"), while the rest indicated that further schooling was important for them, but unaffordable or less preferable than work, or that they were simply postponing it. To buttress this attitude, over half (55.6%) indicated that, if it were available, they would "spend the money necessary for further

schooling." Nearly half of these seniors (47.7%) stated they would need money for all expenses, another third indicated that they would need money for about half of the expenses, and 18.8% reported that even a little available money would encourage further schooling.

Two thirds (66.4%) of the work group indicated that they had received either "some" or "quite a lot" of encouragement to consider further schooling from teachers or counselors. When asked if they planned to attend any school part-time next fall, only one-third responded with an unconditional "no," forty percent indicated they were considering it, and one-fourth answered affirmatively. Finally, the type of employment they expected to have next year corresponded (perhaps quite realistically) to the pattern of entry-level and low-paying jobs many of them now had.

The Vo-tech Group. This group is perhaps the most interesting of the three plan groups in many respects. For example, overall impressions of this group include that of being the most disadvantaged in socioeconomic terms, intermediate between the work and college groups in many variables, and the most knowledgeable about many of the student financial aid programs. Specifically, their responses indicate that, like the college group, a slight majority of them are females (51.8%) and that they are slightly older than the college group (54.3% 17 or younger compared with 60.7% of the college group), but not as old as the work group (45.7% 18 or older compared with 48.4%). The vo-tech group includes a disproportionately high percentage of minority groups, for example, 18.5% of them are Mexican-

Americans compared with 14.6% of the work group and 8.7% of the college group. Nearly thirty percent (29.7%) of the vo-tech group is comprised of racial/ethnic minorities compared with 21.9% of the work group and only 15.2% of the college group. Of the three groups, the vo-tech group has the lowest distribution of family income; for example, 28.5% of them reported their family income as being in one of the three lowest categories ($9,000 per year or less) compared with an even 25% for the work group and only 15.7% of the college group. Since level of income is, of course, interrelated with such factors as type of income and level of educational attainment, it is no surprise to note that the vo-tech group also ranks lowest in terms of type of occupation of both father and mother and in educational attainment of both parents (a notable aspect of these distributions is that a disproportionately high percentage of both mothers and fathers had attended a trade or technical school compared with the parents of work and college group respondents.)

The vo-tech group ranked in an intermediate status between the work and college groups in the following variables: employment during high school, hours worked per week, type of job, number of older siblings in college, parental attitude toward post-high school plans, and similarity of the plans of friends. However, they ranked highest in terms of knowledge about several of the student financial aid programs, including SEOG, GSL, and Social Security benefits. Furthermore, they ranked highest in percentage of the three groups who listed

"friends" as a source of information about financial aid programs, and relatively high percentages listed high school counselor, high school teacher, and parents/relatives as other sources of information.

In terms of the information the vo-tech group provided specific to their own type of plan, nearly three-fourths of them (71.5%) were not planning to enter a vo-tech program similar to their present employment, but only one-third of them had already applied to a selected vo-tech school. In response to a forced choice item which inquired why they had not chosen to pursue a four-year degree, about one-fourth of them indicated they wanted to be independent as soon as possible, while a similar proportion indicated that they like vocational courses; only 16.3% indicated that they disliked general courses, and 31.4% indicated that they plan to seek a college degree sometime in the future. In reference to source of information about their prospective school or schools, the responses were very evenly divided. The percentages of responses identifying "parents/relatives," "friends," "high school teachers/counselors," "school brochures," "school representatives," and "still undecided" ranged from 12.8% to 19.7%. Information media such as television accounted for only 1.5% of the responses. As might be expected, the importance of the prospective vo-tech school's placement service was either "somewhat" or "very" important to over 80% of the vo-tech seniors. Finally, their plans for working next year during enrollment in a vo-tech program indicates a heavy

involvement with employment with well over one-half indicating that they would work at least 21 hours per week.

The College Group. It was, of course, no surprise to learn that the college-bound group was by far the most academically able, the most advantaged in terms of socioeconomic background and parental support, and the most knowledgeable about student financial aid. However, the extent of the differentiation among the three groups, especially in terms of the extremely high ranking of the college group, was most striking. In many of the variables, the amount of overlap with the lower-ranking groups was very slight, indicating the college-bound seniors were as a group somewhat set apart.

While the college group shared with the work and vo-tech groups the almost equal split between females and males, they, like the vo-tech group, recorded a slightly higher percentage (51.1%) of females. However, they were sharply differentiated from the other two groups in age distribution, with fully 60.7% aged 17 or younger compared with 54.3% of the vo-tech group and 51.6% of the work group. As suggested previously, the college group included relatively few minority students and a high percentage (81.2%) of whites.

In terms of socioeconomic and family background, the college group is clearly the most advantaged. For example, nearly sixty percent (58.9%) of them reported their estimated family income as either $15,000 to $20,000 per year or over $20,000 per year compared with a total of only 38.8% of the work group and 35.9% of the vo-tech group in these categories.

Furthermore, the college group ranked highest across the board in educational attainment of both parents, especially in the percentage of those who attained various levels of post-high school education, and in occupation of both parents, especially those in professional or managerial types of occupations. Of all the variables in this survey, high school grade average differentiated the three groups most distinctly. Over 85% of the college-bound seniors achieved either an "A" or "B" grade point average. In contrast to the nearly one-third (31.6%) of the college group who achieved an "A", only 8.7% of the work group and an almost identical percentage (8.6%) of the vo-tech group reported an "A" average. Compared with the other two groups, lower percentages of the college group were employed during the school year and of those who did work, they tended to work fewer hours per week than the other two groups. A significantly higher percentage of the college group reported that they had at least one older sibling attending college and, more importantly, they enjoyed a great deal of support for their post-high school plan in terms of parental attitude, with an even 90% of their parents reported as either "approving" the plan or "enthusiastic" about it. Nearly three-fourths (73.6%) of the college group indicated that their friends have similar post-high school plans compared with only 58.5% of the vo-tech group and 49.5% of the work group. Finally, the college group ranked highest in terms of knowledge of a majority of the student financial aid programs listed in the questionnaire including BEOG, CWS, NDSL, ROTC, and in college financial aid

programs. Furthermore, they ranked highest in percentages of those indicating high school counselor, colleges, and parents/ relatives as sources of information about financial aid programs.

The section of the questionnaire specific to the college group discussed three main topics, namely, college selection and plans for attendance, reasons for planning to live at home while attending college, and reasons for living away from home while in college. About half (51.9%) of the college-bound seniors planned to attend one of the three Arizona universities, with Arizona State University as the most popular choice (19.7%), followed by the University of Arizona (16.9%) and Northern Arizona University (15.3%). Nearly thirty percent (29.7%) of these seniors selected one of the Arizona community colleges. Only 17.2% of the group planned to attend an out-of-state private or public college or university. A remarkably high percentage (56.6%) indicated that they would attend a college outside of Arizona and the southwest if they could afford it. This is somewhat puzzling since the public sector of higher education in Arizona collectively offers the full range of program opportunities, from the most advanced and specialized professions to tuition-free community colleges with few, if any, academic restrictions for Arizona high school graduates. Perhaps the scarcity of private colleges, both nondenominational and church-related in Arizona may be part of the answer. Over half (55.0%) of the college group seniors applied to either one or two colleges or universities. Surprisingly, over one-fourth (26.5%) had not yet

applied to a college, despite the fact that the response was given in late March of their year of graduation.

One of the more crucial items in the questionnaire asked the college group seniors to indicate their most important reason for attending college. The pattern of responses to this question may be disturbing to many with certain, especially traditional, assumptions about why students attend college, particularly those who assume that most, or even a sizable minority of students, are interested in intellectual pursuits or "learning for its own sake." Nearly three-fourths (73.3%) of the college-bound seniors are strongly and distinctly career oriented, checking "to prepare for a career and earn a good living" as their most important reason for their plan. Nearly one-fifth (19.8%) of the seniors indicated that they were seeking preparation to "live a better life." Only 5.9% indicated that intellectual attainment was their goal, with the one remaining percentage reporting sociability as their most important reason. Most of the seniors in the college group planned to work during their first college year, but were planning moderate work schedules of eleven to twenty hours per week or lighter work schedules of one to ten hours weekly.

The college group seniors were specifically instructed to answer either one of two sets of four specially designed questions relating to their housing arrangements for their first year in college. Of those who indicated that they planned to live at home while attending college the following year, 57.3% selected the college they planned to attend because

commuting is inexpensive. Familiar home surroundings were thought to be advantageous by 71.8% of the respondents, and only 25.4% of the college group seniors reported that they selected a commuter type college in order to test their potential success in college. If the opportunity to live at home while attending college were not available to them, 42.8% of the college group seniors indicated they would not be able to attend college. Clearly, the potential savings in out-of-pocket expenditures presented by being able to live at home was a most important consideration to many of the college-bound seniors.

Of those who planned to live away from home while attending college, only 20.3% had received a grant to attend the selected college. Nearly two-thirds (64.8%) of the seniors selected their college because of a particular program available, even though 45.5% of the group indicated that attendance at the college they selected would be a financial hardship. A large majority (81.1%) of these seniors answered negatively to the question "Did you choose this college mainly because you want to begin living away from home as soon as possible?"

Plans for Financing Post-high School Education. Both the vo-tech and college groups of seniors were asked to indicate their plans to pay for schooling costs next year. The vo-tech students planned to rely heavily on job earnings; 36.4% of them expected to pay "half," "most" or "all" of their costs from this source. In contrast, only 22.7% of the college-bound seniors planned to rely this heavily on their job earnings. Extent of reliance on parents for financing differentiated

the two groups sharply, with nearly half of the college group expecting their parents will pay at least half of their costs compared with only 35% of the vo-tech group with a similar response. Neither of the groups expected to rely heavily on grants or scholarships, loans or personal savings. Three-fourths or more of both groups responded that each of these three sources would pay either "some" or "none" of their schooling costs the following year.

In final summation, this study demonstrated that a statewide survey of post-high school plans, the first of its kind in Arizona, is feasible and can engage the interest and cooperation of hundreds of Arizona school personnel, including administrators, faculty, counselors and staff, as well as the willing participation of thousands of graduating seniors across the state.

The final outcome proved that the unusual arrangement of a two-phased overall study, comprised of a pilot or preliminary phase leading to a full-scale data-gathering effort, was ultimately advantageous, even though it was developed in response to the vagaries of federal funding rather than a deliberate research design.

Findings from the survey were both reassuring and discouraging. Arizona is clearly doing a good job in providing a wide range of opportunities for postsecondary education to its youth, as witnessed by the full sixty percent of the 1977 graduating class who planned to pursue either a baccalaureate degree or a shorter-term career-oriented program. This is

well within the fifty to seventy-five percent range experienced by other states. Yet, why are so few minorities planning to pursue four-year degrees? This is not to imply that vo-tech programs are less appropriate or desirable, but to question whether circumstances of socioeconomic status are restricting these youth from full choice of type of program. We do not subscribe to the proposition that the higher learning, or academic pursuits are appropriate or even feasible for many youth who have neither academic ability or interest. The forty percent planning baccalaureate programs unquestionably includes many such young persons. We do contend, however, that only the lack of natural ability and interest, and only that, should inhibit Arizona youth from full participation in opportunity for further education.

Certainly the efforts so well begun in Arizona and elsewhere to "let each become all he or she is capable of becoming" through postsecondary education should be fully consummated. It is possible as witness the recent transformation (perhaps even revolution is an apt term) in the participation of females in postsecondary education. As recently as ten years ago, surveys such as this automatically assumed (and invariably found) that the percentage of females planning for and enrolling in higher education programs would be substantially less than that for males. This, despite decades-long evidence that they were no less able and had achieved better high school grades, but simply because of prejudicial family and societal attitudes and presumptions. It is possible that the same inequities and

potential for change exists in the relatively low participation of certain subgroups of Arizona youth, whether on the basis of racial/ethnic background, socioeconomic status or other factors.

Finally, why are there such strong indications that large percentages of those not planning further education would do so except for the lack of financial resources, even when a "small amount would encourage further schooling?" Why must such heavy reliance be placed, both by vo-tech and college-bound seniors, on projected employment during their first school year? Surely when so many indicate they must plan to work at least 21 hours per week to finance their initial year of schooling, the inevitable result will be reduced academic achievement, interrupted progress, and even permanent dropping out. Clearly, the next major thrust in Arizona postsecondary education will be in financial aid to students.

Recommendations

As indicated earlier in this report, it would be naive to assume that this study could "provide solutions" to present and persistent problems and concerns. "The findings generated will provide information presumably useful to decision-makers in the public secondary and postsecondary sectors in Arizona. Their policies and decisions may well utilize these findings, but will be based ultimately on political, economic and social, as well as educational, considerations." (pp. 3-4 above).

Nonetheless, it is useful to illuminate areas and problems to which these findings can reasonably be related. Also, it is

customary in an initial and benchmark survey such as this to identify and recommend further topics for investigation. Since this was a primary objective, rather than an anticipated by-product of the survey, we will conclude this report with such recommendations.

This study has uncovered variables that, considered in aggregate, identify subgroups who are predisposed to one type of post-high school plan or another. For example, a student with high academic achievement and a combination of positively related socioeconomic variables like family income, educational attainment and occupation of parents, has a very high likelihood of pursuing a four-year degree. However, if a student has high academic achievement, but a very low family income, or is of a minority racial/ethnic background, or any of a number of other indicators, that likelihood is greatly reduced. The findings in this study could be used for guidelines in developing an "early warning" system in which academic or career counseling, supplemental information on the availability of student financial aid, or other special treatment could constitute positive intervention for fulfilling educational aspiration.

The emphasis here is to recommend early counseling and intervention strategies, for, even though specific data were not gathered on this issue, strong impressions were provided by the findings suggesting that "the die was cast" well before the senior year. This recommendation leads directly to a suggestion that systematic surveys be made of unfolding

attitudes and aspirations toward post-high school education, perhaps as early as the seventh or eighth grade.

It is further recommended that the present survey of seniors post-graduate plans be replicated at two or three year intervals to measure changes or trends. If a survey of earlier grades is undertaken as suggested above, it is recommended that it be coordinated with any replication of the senior survey so that a longitudinal overview could be obtained to measure changes during a student's high school career.

Now that the present survey has "broken ground" and established feasibility and benchmark findings, subsequent surveys could concentrate on applicability and utility. For example, it may be possible to coordinate a senior post-high school plans survey with "last-minute" enrollment projections to alert admissions offices and instructional officers of postsecondary educational institutions of unexpected surges and/or drops in enrollment. Once trend data about post-high school plans are established and validated through replication, such use could very well be made of the data.

It is recommended that consideration be given to establishing a follow-up procedure for subsequent post-high school plans surveys, not only to validate the expressed intentions, but to learn <u>why</u> plans were or were not carried out, and perhaps to directly provide counseling, financial assistance, or other services.

Even though only a preliminary and exploratory probe was made of student financial aid topics, the data strongly suggested that financial aid programs need to be expanded and that the availability of student financial aid should be more widely publicized and occur earlier in the high school career. Toward this end it is suggested that while the institutional base for many financial aid programs be retained for a variety of reasons, state and federal programs could be highly effective in working directly with high school counselors as well as financial aid officers within the postsecondary institutions. Because the data were so strongly suggestive, strongest priority is hereby urged for an in-depth focused survey of student financial aid in Arizona as it impacts the crucial transition from high school to post-graduate activities. Attention must be given to identifying and measuring the extent of unmet need, ways to improve student knowledge about financial aid programs, and whether present programs are effective in helping those for whom they were intended.

FOOTNOTES

[1]This chapter is a summary of many of the highlights of the 343 research studies reviewed for this report and listed in the bibliography, Appendix A. The chapter is comprised of three primary sources of prepared material based on this extensive review: (a) the review of literature prepared for the final report of Phase I updated and expanded; (b) new material prepared by the Project Director especially for this chapter; and (c) sections from a manuscript reviewing the research literature pertaining to the transition from high school to vocational-technical programs prepared by Mr. Fred Gaudet, research assistant for this study (this will appear in his doctoral dissertation being completed at the Center for Higher and Adult Education at Arizona State University). Please note also that much of the following chapter, Methodology, was also based on material prepared by Mr. Gaudet.

[2]From a personal statement to the Project Director by Dr. Earl McGrath. A recounting of this statement was provided by the author to Mr. Peter Muirhead and appears in his foreword to Applying the Goals of Student Financial Aid by Jonathan D. Fife, The American Association for Higher Education, Washington, DC, 1975.

[3]Responses to this question are contingent on appropriate responses to the preceding question. The numbers of responses to this question exceeded the number giving the appropriate response to the preceding question. Therefore, an approximation was made in both frequency and percentage distribution by the following adjustment. A proportionate reduction in both frequency and percentage responses was made equal to the proportionate difference between the preceding question response total and this conditional question response total. This procedure assumes no significant bias related to respondent failure to recognize or observe the conditional nature of this question. Since it is not possible to empirically validate this assumption, the distributions shown should be regarded as approximations only.

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APPENDIX A

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APPENDIX B

LETTER OF INVITATION

ARIZONA COMMISSION FOR POSTSECONDARY EDUCATION

SUITE 140-F
4350 E. CAMELBACK ROAD
PHOENIX, ARIZONA 85018

TELEPHONE (602) 271-3109

March 8, 1977

The Arizona Commission on Postsecondary Education is undertaking a study of the post-graduate plans of Arizona high school seniors. The study is being conducted for the Commission by the Center for Higher and Adult Education at Arizona State University.

The study involves surveying the graduating seniors in a sample of high schools selected with the cooperation of the State Department of Education and the American College Testing Program. The students will be asked to relate their post-high school plans by responding to a brief questionnaire. This activity will involve the seniors in each school for 15 to 20 minutes in one class period. The Commission feels that this information will be useful in planning and coordinating post-high school educational and career opportunities for our Arizona high school graduates.

Your school was selected in the sample. We will be calling you very soon to ask for your cooperation, explain the study further and to ask your advice and consultation about the transition from high school to careers or college of young people in your area.

Sincerely,

Dr. Robert H. Fenske
Project Director
Professor of Higher Education

RHF:mlr

APPENDIX C

LIST OF PARTICIPATING SCHOOLS AND RESPONSE RATES

APPENDIX C

List of Participating High Schools

School	Size of Graduating Class (est.)	Respondents in Study	Stratum
Ajo	111	79	Rural, Small, Mixed
Baboquivari	35	16	Rural, Small, Minority
Benson	78	63	Rural, Small, White
Camelback	650	296	Urban, Large, White
Chandler	387	181	Urban, Medium, White
Coconino	313	226	Rural, Medium, Mixed
Dysart	140	81	Urban, Medium, Minority
East	382	294	Urban, Large, Mixed
Flagstaff	250	103	Rural, Medium, Mixed
Florence	75	48	Rural, Small, Mixed
Flowing Wells	225	117	Urban, Medium, White
Ft. Thomas	31	19	Rural, Small, Mixed
Gila Bend	36	23	Rural, Small, White
Grand Canyon	17	11	Rural, Small, White
Greenway	456	313	Urban, Medium, White
Hayden	58	48	Rural, Small, Minority
Kofa	474	272	Rural, Large, White
Lake Havasu	217	134	Rural, Medium, White
Marana	183	98	Rural, Medium, White
Marcos de Niza	500	263	Urban, Large, White
McClintock	460	250	Urban, Large, White

School	Size of Graduating Class (est.)	Respondents in Study	Stratum
Miami	133	96	Rural, Small, Mixed
Mohave	125	97	Rural, Small, White
Monument Valley	92	33	Rural, Small, Minority
Moon Valley	370	274	Urban, Large, White
Nogales	240	70	Rural, Medium, Minority
North	310	163	Urban, Medium, Mixed
Paradise Valley	411	195	Urban, Large, White
Patagonia Union	20	13	Rural, Small, White
Project M.O.R.E.	26	33	Urban, Small, White
Sabino	350	247	Urban, Medium, White
Saint David	22	18	Rural, Small, White
Saint John	51	33	Rural, Small, White
San Manuel	195	123	Rural, Medium, Mixed
Santa Rita	576	342	Urban, Large, White
Scottsdale	423	276	Urban, Large, White
Sunnyslope	454	342	Urban, Large, White
Tempe	411	249	Urban, Medium, White
Thatcher	58	35	Rural, Small, White
Tucson	417	148	Urban, Large, Minority
Tucson Extended Day	55	30	Urban, Small, Mixed
Westwood	800	333	Urban, Large, White
Wickenburg	86	70	Rural, Small, White
Willcox	95	92	Rural, Small, White
Window Rock	116	67	Rural, Small, Minority

APPENDIX D

LETTER TO SCHOOL ADMINISTRATOR ENCLOSED WITH QUESTIONNAIRES

ARIZONA COMMISSION FOR POSTSECONDARY EDUCATION

TELEPHONE
(602) 965-6248

March 15, 1977

Dear Principal:

Enclosed are the questionnaires to be completed by seniors in your high school. As indicated to you earlier, this study of post-graduate plans of high school seniors is being conducted for the Arizona Commission for Postsecondary Education by the Center for Higher and Adult Education at Arizona State University. Please call me at 965-6248 if you have any questions.

The questionnaires, answer sheets, and accompanying instructions may be distributed to the appropriate classroom teacher(s) or counselors for administering at some convenient time before April 15. Total administration time required should not exceed twenty minutes.

Your willingness to cooperate with this project is appreciated. The results of the study will provide valuable information for planning postsecondary opportunities for citizens of Arizona.

The completed questionnaires should be returned as soon as possible after administration. Thank you for cooperating in this project.

Sincerely,

Robert H. Fenske

Robert H. Fenske
Project Director
Professor of Higher Education

RHF:mlr

Enclosures

APPENDIX E

INSTRUCTIONS FOR ADMINISTERING QUESTIONNAIRES

ARIZONA COMMISSION FOR POSTSECONDARY EDUCATION

Questionnaire Instructions

TO THE ADMINISTERING TEACHER/COUNSELOR:

The Arizona Commission for Postsecondary Education is sponsoring this study to obtain information about post-graduate plans of Arizona high school seniors. Your assistance in administering the questionnaire is very important and appreciated. The study will provide information useful in planning educational and career opportunities for citizens of the state. The total time required for administering each questionnaire should be less than twenty minutes.

The following procedure is suggested for administering the questionnaire:

1. If given during a class period, please distribute a questionnaire to every senior.

2. Instruct the students to read carefully the instructions on the cover page and answer questions they may have.

3. Stress the importance of using Side 2 of the answer sheet only, and to darken fully the correct oval on the answer sheet for each question using a soft or medium lead pencil (#1, 2 or 2 2/4).

4. Emphasize that each student should answer the beginning section on pages 1 and 2, and only one of either Section A, B or C. (NOTE: Students who are currently undecided should select the one section most likely to apply to the student.)

5. Assure the students that all information they provide is completely anonymous and no attempt will be made to identify individuals or schools with their responses.

6. The questionnaires may be discarded after administration; return the unfolded answer sheets to the principal's office for sending in the postage paid shipping envelope if provided, or call 965-6248 for any necessary instructions or if any questions arise.

YOUR COOPERATION WITH THIS PROJECT IS SINCERELY APPRECIATED.

APPENDIX F

QUESTIONNAIRE

ARIZONA COMMISSION ON POSTSECONDARY EDUCATION

TO: Graduating Seniors

The educational agencies of the State of Arizona need more information about the post-high school plans of graduating seniors to assist in planning for higher education and for the work careers of young persons. Information that you will provide on this form will be used for this purpose, so it is important that you answer the questions carefully and accurately. This is not an examination or test; you will provide information about your plans and some background information about yourself.

All the information supplied by you for this survey is confidential. Therefore, please do not use Side 1 of the answer sheet which requests identification information. If any survey items request information which you do not wish to provide, please feel free to omit those questions.

This form should take no more than 15 or 20 minutes to complete. You are asked to respond only to the questions below and on the next page and IN ONLY ONE OF THE FOLLOWING SECTIONS--THE ONE SECTION WHICH APPLIES TO *YOU* AND *YOUR* PLANS FOR NEXT YEAR.

Please use the separate answer sheet to record your answers. Do so by blackening with a soft lead pencil the correct oval after the number corresponding to the question number. For example, the first question is:

1. What is your age?

   a. Under 16
   b. 16
   c. 17
   d. 18
   e. 19
   f. 20

If your age is 18, blacken oval (d) after number 1 on Side 2 of the answer sheet.

2. How many older brothers or sisters do you have who graduated from high school and are now attending college or other school?

   a. None
   b. One
   c. Two
   d. Three
   e. Four or more

3. Sex

   a. Female
   b. Male

4. What is your estimate of your parents' income this year (total income before taxes)?

   a. Under $3,000
   b. $3,000 to $6,000
   c. $6,000 to $9,000
   d. $9,000 to $12,000
   e. $12,000 to $15,000
   f. $15,000 to $20,000
   g. Over $20,000

5. What is your overall grade average in high school?

   a. A
   b. B
   c. C
   d. D
   e. Lower than D

6. How do your parents feel about your plans for next year?

   a. Very enthusiastic about my plans
   b. Think I'm making the right choice
   c. Makes no difference to them
   d. Really not in favor of my plans
   e. Strongly disapprove of my choice

7. Do most of your friends have similar post-high school plans?

   a. Yes
   b. No

8. How would you describe your racial/ethnic background? (Check only one)

   a. American Indian
   b. Black American
   c. Mexican American
   d. Oriental American
   e. White
   f. Other

9. Which statement best describes how much education your father (or male guardian) has?

   a. Less than high school
   b. High school graduate or equivalent
   c. Trade, vocational, or technical program
   d. Some college (less than four years)
   e. Four years of college (earned degree)
   f. Graduate degree (masters, M.D., law degree, etc.)

10. Which statement best describes how much education your mother (or female guardian) has?

    a. Less than high school
    b. High school graduate or equivalent
    c. Trade, vocational, or technical program
    d. Some college (less than four years)
    e. Four years of college (earned degree)
    f. Graduate degree (masters, M.D. law degree, etc.)

11. Do you now have a job?

    a. Yes
    b. No

12. If yes, how many hours per week do you work?

a. 1 - 10 hours
b. 11 - 20 hours
c. 21 - 30 hours
d. Over 30 hours

13. What type of work is your job?

a. Service (hourly wage), for example, work in a gas station, stock clerk in a store, etc.
b. Secretarial, for example, typist, file clerk, receptionist, etc.
c. Restaurant work, for example, waitress, busboy, cook, etc.
d. Sales/service, for example, door-to-door sales, sales clerk in a store, telephone canvassing, etc.
e. Farm, ranch work
f. Laborer, for example, in a factory or mine, or on construction
g. Apprentice, for example, plumbing, sheet metal, etc.

14. What is your father's usual occupation?

a. Managerial or executive (banker, store owner or manager etc.)
b. Professional (doctor, lawyer, professor)
c. Sales (real estate or insurance agent, department store sales, etc.)
d. Semiprofessional or technical (programmer, machine operator, etc.)
e. Skilled trade (electrician, carpenter, plumber, construction, etc.)
f. Farmer or rancher
g. General labor (factory worker, farm worker, miner, etc.)

15. What is your mother's usual occupation?

a. Health fields (nurse, dental technician, laboratory technician, etc.)
b. Housewife
c. Professional (doctor, lawyer, professor)
d. Sales (real estate or insurance agent, department store sales, etc.)
e. Secretarial (typist, file clerk, receptionist, etc.)
f. Service (maid, janitress, etc.)

16. Do you know about the Basic Education Opportunity Grant (BEOG)?

a. No
b. Yes, I have already applied for a grant
c. Yes, I plan to apply for a grant
d. Yes, but I will not apply for a grant

Do you know about the availability of the following financial aid programs?

17. Supplemental Educational Opportunity Grants (SEOG)

a. Yes b. No

18. College Work-Study Program (CWS)

a. Yes b. No

19. National Direct Student Loans (NDSL)

a. Yes b. No

20. Guaranteed Student Loans (GSL)

a. Yes b. No

21. Social Security Education Benefits

a. Yes b. No

22. ROTC (Army, Navy, or Air Force)

a. Yes b. No

23. Scholarships, loans, or employment sponsored by schools or colleges

a. Yes b. No

Please indicate whether or not you received information about any of the above financial aid programs from the following sources:

24. High school counselor

a. Yes b. No

25. High school teacher

a. Yes b. No

26. Classmates or friends

a. Yes b. No

27. The school or college you plan to attend

a. Yes b. No

28. Parents or relatives

a. Yes b. No

29. Other sources (such as newspaper, TV, etc.)

a. Yes b. No

You are now asked to answer questions in only one of the following sections--the one section which applies to you and your plans for next year. (If you are uncertain at this time about what you will be doing next year, answer the questions in the one section most likely to apply to you.)

SECTION A: For those who do not plan to attend, as a full-time student, a school or college next year. For example, those getting a full-time job, entering the armed services, beginning an apprenticeship in a trade, or becoming a housewife. Section A is also for those who will attend a school or college only on a part-time or evening basis.

SECTION B: For those who plan to attend full-time, a trade, technical, or business school next year in order to prepare for a career or occupation which does not require a four-year degree from a college or university. These would include technical institutes, a career program in a community college, cosmetology schools, etc.

SECTION C: For those who plan to attend full-time a college or university program leading to a four-year baccalaureate degree. This would include the regular college transfer program in a public community college, Arizona State University, the University of Arizona, or Northern Arizona University. It would also include out-of-state colleges or universities of this same type.

Section A

IF YOU DO *NOT* PLAN TO ATTEND SCHOOL OR COLLEGE *FULL TIME* NEXT FALL, ANSWER QUESTIONS IN THIS SECTION.

30. What will you probably do next year? (Check one)

    a. Work
    b. Military service
    c. Housewife
    d. Mostly travel around
    e. Other

31. If you plan to work, what type of work will you probably do?

    a. Service (hourly wage), for example, work in a gas station, stock clerk in a store, etc.
    b. Secretarial, for example, typist, file clerk, receptionist, etc.
    c. Restaurant work, for example, waitress, busboy, cook, etc.
    d. Salesperson, for example, door-to-door, sales clerk in a store, telephone canvassing, etc.
    e. Farm or ranch work
    f. Laborer, for example, in a factory or mine, or on construction
    g. Apprentice, for example, plumbing, sheet metal, etc.

32. Check the one statement below which best expresses your feelings about the importance of further schooling for you.

    a. It is important, but I can't afford it.
    b. It may be important, but I prefer to work and learn on the job.
    c. I've had enough of school.
    d. I plan to work until I decide what further schooling I want.

33. If you had it, would you spend the money necessary for further schooling?

    a. Yes b. No

34. If yes, how much money would you need?

    a. Enough to pay all expenses
    b. Enough to pay about half of expenses
    c. If even a little money were available, I would seriously consider further schooling

35. To what extent did your teachers and counselors encourage you to attend college or further schooling?

    a. Quite a lot
    b. Some
    c. Gave no indication at all
    d. Discouraged the idea

36. Do you plan to attend a school or college part time next fall?

    a. No
    b. Not next year, but maybe later on
    c. Maybe. I'll wait and see
    d. Yes, part-time in a vocational-technical program
    e. Yes, part-time in a program leading to a four year baccalaureate degree
    f. Yes, part-time, but not in any specific program

You have now completed the questionnaire. Thank you. Do not answer any more questions.

Section B

IF YOU PLAN TO ATTEND *FULL TIME* A TRADE, TECHNICAL, OR BUSINESS SCHOOL, OR COLLEGE PROGRAM THAT LEADS DIRECTLY TO A JOB IN TWO YEARS OR LESS, ANSWER QUESTIONS IN THIS SECTION.

37. What type of school or college do you plan to attend (or are most likely to attend)? Check one.

    a. Business school
    b. Cosmetology school
    c. Health professions school
    d. Local community college (career education program)
    e. Trade or technical school
    f. Other

38. Did your father attend a trade, technical, or business school?

    a. Yes b. No

39. Did your mother attend a trade, technical, or business school?

    a. Yes b. No

40. If you now have a job, do you plan to enroll in a school or college career program that is in the same type of work as your present job?

    a. Yes b. No

41. Why are you *not* planning to work toward a four-year degree by attending a college or university?

    a. I want to be on my own in two years or less.
    b. I am impatient with the general type of courses; I think courses should all be related to earning a good living.
    c. Vocational type courses appeal to me most; I don't do well in the general courses.
    d. I am interested in a four-year degree, but plan to postpone earning it until later.

42. Have you already applied to the school you plan to attend?

    a. No
    b. Haven't decided on a specific school
    c. Yes

43. What was the main source of information about the school you plan to attend?

    a. Parents and/or relatives
    b. Friends and/or other students
    c. High school teachers and/or counselors
    d. School catalogs, booklets, etc.
    e. Representative of the school
    f. TV, newspapers, Yellow Pages
    g. Haven't decided on a specific school

44. How important is the schools' placement service in getting you a good job after completing their program?

    a. Not important
    b. Somewhat important
    c. Very important

Please skip to question number 57 on next page.

Section C

IF YOU PLAN TO ATTEND *FULL TIME* A COLLEGE OR UNIVERSITY PROGRAM LEADING TO A FOUR-YEAR BACCALAUREATE DEGREE, ANSWER QUESTIONS IN THIS SECTION.

45. What college or university do you plan to attend (or are most likely to attend)?

a. Arizona State University
b. Northern Arizona University
c. University of Arizona
d. Community College in your locality or elsewhere in Arizona
e. Private college or Bible or divinity school in Arizona (for example, Grand Canyon College, Phoenix Christian Bible College, Southwestern College)
f. Private college or university out-of-state
g. Public college or university out-of-state

NOTE: The next four questions are for those who plan to live at home while attending college next year:

46. Will you be attending the college you picked mainly because you can save money by living at home?

a. Yes b. No

47. Do you feel that being in familiar home surroundings is an advantage when you begin college?

a. Yes b. No

48. If the local college were not available, could you afford to attend a college away from home?

a. Yes b. No

49. Are you attending this college to see if you can succeed in college, but not have to leave the area to find out?

a. Yes b. No

PLEASE GO ON TO QUESTION NO. 54

NOTE: The next four questions are for those who do *not* plan to live at home while attending college next year.

50. Have you received a grant or scholarship to attend this particular college?

a. Yes b. No

51. Did you choose this college mainly because you want to begin living away from home as soon as possible?

a. Yes b. No

52. Did you choose this college because of a particular program it offers?

a. Yes b. No

53. Will attending this college away from home be a financial hardship on you and your family?

a. Yes b. No

Section C - continued

54. Would you attend college in a different part of the country if you could afford it?

a. Yes b. No

55. To how many colleges or universities have you applied for admission?

a. One d. Four or more
b. Two e. None yet
c. Three

56. What do you consider the most important reason for attending college? (Check only one)

a. To prepare for a career and earn a good living
b. For intellectual attainment
c. To help myself prepare to live a better life
d. To meet people and have a good social life

57. Do you plan to work while going to school next year?

a. Yes, 1 - 10 hours a week
b. Yes, 11 - 20 hours a week
c. Yes, 21 - 30 hours a week
d. Yes, over 30 hours a week
e. No

How do you plan to pay for your schooling costs next year?

58. Earnings from a job will pay:

a. None of the costs
b. Some of the costs
c. About half of the costs
d. Most of the costs
e. All of the costs

59. Parents will pay:

a. None of the costs
b. Some of the costs
c. About half of the costs
d. Most of the costs
e. All of the costs

60. Grant or scholarship will pay:

a. None of the costs
b. Some of the costs
c. About half of the costs
d. Most of the costs
e. All of the costs

61. Loan will pay:

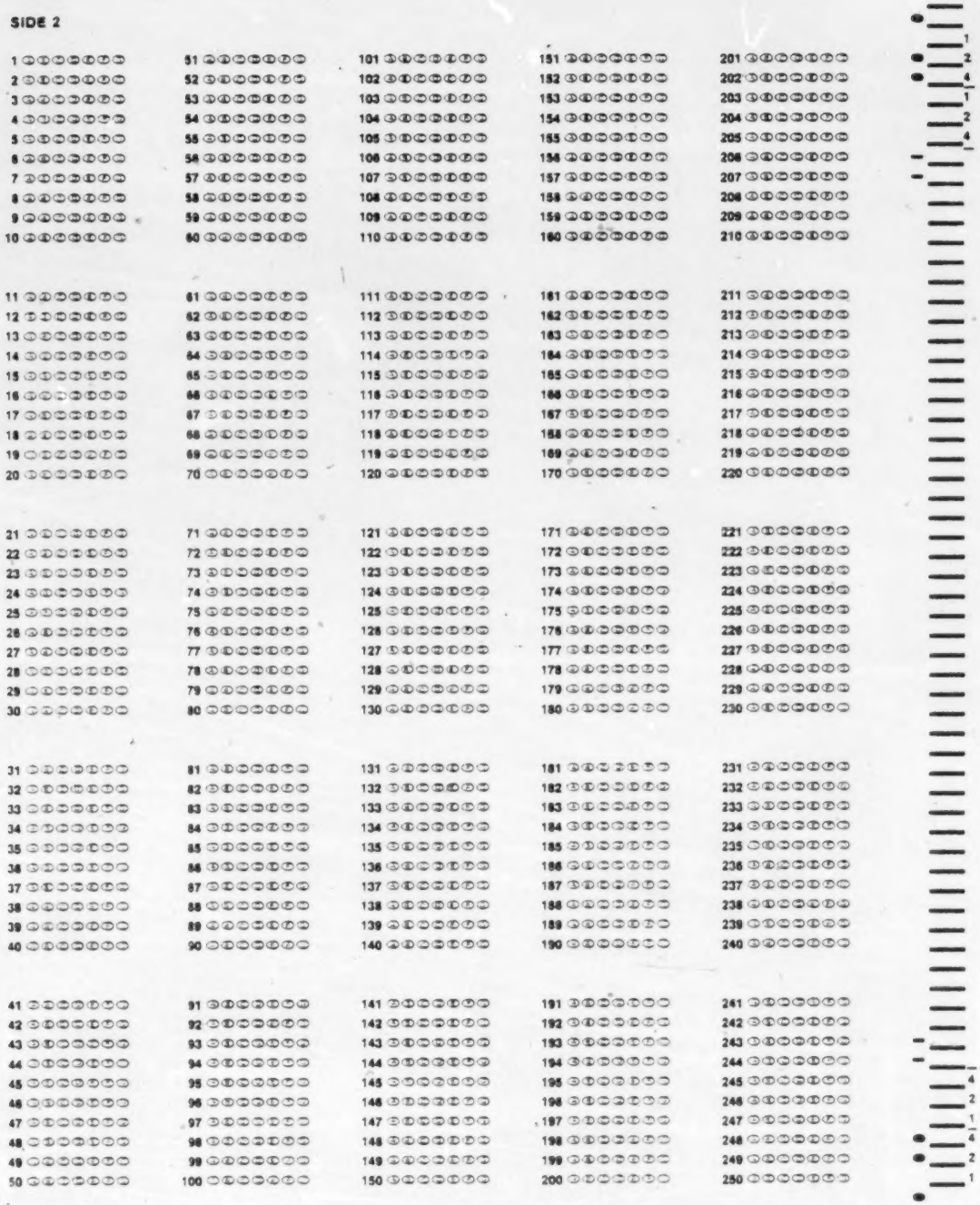
a. None of the costs
b. Some of the costs
c. About half of the costs
d. Most of the costs
e. All of the costs

62. My own savings will pay:

a. None of the costs
b. Some of the costs
c. About half of the costs
d. Most of the costs
e. All of the costs

Thank you for completing this questionnaire.

APPENDIX G

OPTICAL SCAN
ANSWER SHEET

SIDE 2